



***Brandon Transit Operating Strategy***

***Approved by City Council – March 19, 2007***

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*We Are People Moving People*



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## Executive Summary

In the last few years there have been significant changes that have occurred in the transit industry across Canada in terms of funding, technology and people's perception of the importance of transit in combating our environmental impact on the world. According to a report issued by Vision Research, 92 percent of urban Canadians believed that public transit was instrumental in making their community a better, healthier place to live. The Suzuki Foundation states that transit could help Canadians pocket \$200 billion in energy savings by 2030 aside from aiding in control of climate change and in reducing harmful emissions affecting public health.

In Brandon there are a number of issues and factors that are or will impact transit operations:

- The impact of transit funding has decreased in the City's general operating budgets. This has been the result of increased funding levels from the other levels of government, through changes that have occurred in the equipment that is being operated and due to an increase in industrial ridership.
- As a community we have experienced some population growth, in conjunction with this growth have experienced growth with respect to residential development and expansion. This trend is expected to see this trend continue as companies such as Maple Leaf continue to expand their operations in Brandon. The workforce required to support this growth is in some cases immigrants who require basic services such as transportation.
- Retail development in the community has changed dramatically over where it was just five years ago. There is a trend to have more development to the north and south, while the focus in the past has been more to the east and west. The current route configuration is predominantly in an east/west orientation and as we continue to see development such as Assiniboine Community College's move to the North Hill, Brandon Transit will need to be in a position to adjust service to meet those needs.
- The average age of the community is continuing to increase, in part due to the number of residents who have moved to the community in order to seek health care services.

In the fall of 2006, Brandon Transit identified the need to develop an overall strategy that would direct the activities of the group over the next five years in meeting the challenges outlined above. In doing so they conducted a comprehensive review of the strategies that are being engaged in other



municipalities, gathered feedback from the current user base and talked to some of the larger employers in the community about their challenges.

### **Regular Transit**

- The existing routes need to be reviewed to ascertain whether they are appropriately serving passenger generating locations.
- Route structures need to be structured to address changes in residential, commercial and institutional development in the community.
- There needs to be additional tools and measures employed to better understand ridership trends and to monitor changes as marketing plans are implemented.
- Service tools need to be developed and implemented in order to address “barriers to use” issues across all demographic groups.
- Brandon Transit needs to continue work with the Brandon School Division to resolve issues related to senior student use of the service and explore other opportunities for savings between systems.
- Alternative fare options / programs need to be developed to address the needs of specific target markets.
- Marketing campaigns specific to target markets that emphasize changes and solutions that overcome “barriers for use” issues need to be developed.
- Operating and capital plans need to support the ongoing maintenance, replacement and upgrading of equipment in order to take advantage of “right sized” equipment, energy efficient technologies and alternative fuel options.

### **Handi Transit**

- Alternatives to meet peak demand requirements through the use of transit friendly time schedules with major users and the layering in of service needs to be explored.
- Transparent consultative processes that ensure the needs of the residents and community at large need to be developed with respect to access to affordable transit for the users of our systems.
- Full implementation and adherence to the NOVUS program needs to continued to fully utilize the program’s capabilities in attaining predictable and executable schedules under peak capacity loading circumstances.
- Focus on communication and customer service to promoting positive perceptions of the system by the users, assisting with system “buy in” needs to continue.
- Operating and capital plans need to support the ongoing maintenance, replacement and upgrading of equipment in order to take advantage of energy efficient and rider safety technologies.



# 1 Introduction

The City of Brandon's Community Strategic Plan identified two of its desirable future statements to be; "Brandon will be recognized leader in environmental stewardship and Brandon will be an economic & social environment which is supportive, sustainable, innovative and providing equal opportunity for all". Brandon Transit's mission is to deliver quality and affordable transportation that links riders to their community. The City of Brandon recognizes that transit is a valuable component in meeting the environmental, social and economic needs of the community in order to achieve our collective desirable futures.

Due to the geographical size of Brandon, the affordable cost of operating a vehicle, and the lack of congestion on roads and for parking, the citizens of the community have not had the same reliance on a transit system to provide their basic needs as those in larger metropolitan areas. This said, as shifts occur in the size and growth of the community, as the population ages and as the operating and environment costs of personal vehicles continues to rise, transit will become the most viable alternative to the private vehicle in providing a balanced and sustainable transportation network.

The Provincial Government has committed to reestablish the 50/50 funding partnership for operating the transit system and to increase capital funding. The Federal Government has committed to provide ongoing transit funding as part of the federal gas tax funding. At both levels of government they have identified the growth and sustainability of transit systems throughout the province and across Canada as being a significant step in meeting the commitments under Kyoto and in establishing sustainable social and economic growth in the country.

This document is intended to outline the trends and work that has been done over the last few years to provide the basis for the recommendations. The recommendations are intended to capture the necessary tools and strategies that will not only improve the quality of service for current users but to try and attract new users while being cost effective for the taxpayers. These tools and strategies have been developed to reinforce the following goals;

- provide access for all areas and sector of the community;
- expand the use of the service;
- develop a system that is affordable and efficient;
- facilitate the development of a livable and environmentally sustainable community;
- satisfy public demand and client needs.

This report outlines first the essential foundation required for an effective transit service through explicit service standards and responsive planning processes including a comprehensive consultation and communication plan. It also identifies the areas of concern as it relates to delivering a cost efficient service while meeting user needs.



## 2 Regular Transit

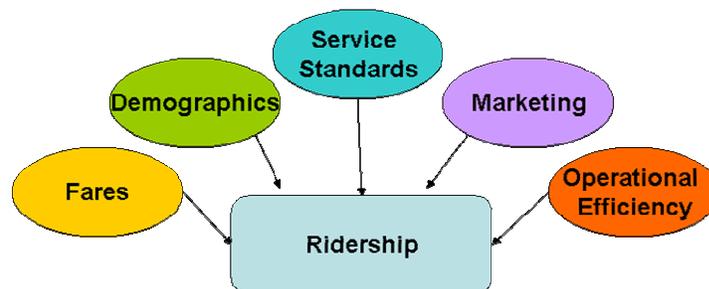
One of the main goals of Brandon Transit is to increase the number of users of the service. We receive a number of benefits as a community when people use transit; reduced environmental impact, less wear on our road networks and less traffic congestion. We also receive a benefit in reducing the cost per rider the more riders there are. There is a fixed cost in running any Regular Transit service regardless of the number of riders (the bus goes around the route regardless of the number of people on the bus), so when we can increase those numbers it means that our costs per rider also decreases. The increased revenue can be reinvested into the service and by doing so continue to make the changes that enhance the system.

We know that there are a number of factors that current and potential riders use in making the decision to use the system. They consider factors such as:

- value - will I receive a service that I want for a reasonable fee?
- convenience – will the service meet my needs and what will be the impact on things such as my time, effort, etc?
- impression management – what is the social impression of me if I use or don't use the system?
- service level – how well am I treated and cared for in using the system? How reliable is the overall system?

How favorably the service is evaluated against this criteria determines whether or not a rider decides to use, or remains a user of the system.

To increase ridership it is important to understand the elements that influence these decisions and to look at how Brandon Transit can influence or impact these to the point that current riders remain on the system and potential riders make the decision to start using the system. The diagram below identifies a number of elements that we know impact how users or potential users make these decisions.



In the following sections, we will explore each of these elements in order to provide the basis for our overall system recommendations. It is important to note that while each of these elements impact ridership levels, they also can have an impact on each other. For example, there could be different marketing requirements depending on the demographic that is trying to be reached, or an increase in operational efficiency may result in a decrease in fares, or the level of ridership could have an impact on operational efficiency, etc. This is a complex system and a change in one may have a resulting change in another one. In exploring each element we will attempt to identify



how they impact each other and make recommendations that take into consideration all elements.

## **2.1 Service Standards**

At its basic level, service standards are the principles and guidelines that are used to establish routes, frequency of service, number of bus stops, etc. These standards are generally a political determination of level of priority given to the service, and secondly the equity balance in terms of distribution of services over the city. The purpose of establishing these standards is to ensure that service meets the needs of the users while allowing for the balance of those needs against the cost effectiveness of the system. Changes in service standards are required as customer expectations and resources change over time. Service levels are affected by the level of demand and therefore population and employment shifts in the service area require a system that can be responsive to these changes in order to attract and retain users of the system.

The service standards that were established and that were used to develop the existing network of routes and services were developed at a time when funding and ridership were in decline, when population levels remained relatively constant and when the economic changes in the community were minimal. As a result in many cases, service levels were reduced. In an effort to balance the reduction, routes were maximized in terms of coverage area and trip duration and now essentially it is very difficult to accommodate growth into the existing route system. Over the last couple of years, we have experienced a shift in most of these areas and as a result now need to re-evaluate the service standards related to the service.

In order to respond to change, the key areas of consideration are;

- the level and demographic of riders
- the distance an average rider travels to a bus stop
- the frequency of service to that stop
- route connection to other routes
- hours and days of operation
- rider value (fares, ease of service, etc.)
- accessibility requirements of stops and transit equipment

Service standards are intended to govern the planning and design of the service, and as such depict a desirable state and are not necessarily indicative of existing service. Brandon Transit will be required to understand based on the key noted areas of consideration if current service and accessibility standards are adequate in servicing the ridership base. Establishing a long term service strategy will assist in development of planning that will move towards meeting new standards. Entra Consultants provided this basis of measurement as part of the study they conducted on Brandon Transit in 2002 (Appendix C)

### **Route and Service Types**

There are a number of building blocks that form a service standard strategy for Brandon Transit. One of these building blocks is in defining various routes and services types. An outline of these along with a brief explanation is outlined below:



- **Base Routes** – provide a basic level of transit access throughout the city, and operate during all periods. These routes operate primarily in the arterial corridors and are intended to provide service to meet the minimum service standard.
- **Local Routes** – form the balance of the fixed route system, feed the base fixed schedule network, and connect community destinations. These routes also provide closer access and higher levels of service during peaks and other periods where warranted by demand.
- **Shuttles/Overloads** – typically used for peak-only services in a local area connecting to specialty destinations.
- **Community Routes** – fully accessible transit services specifically designed to provide access to facilities oriented to seniors, people with disabilities and other community markets. (Brandon Transit does not currently operate a community shuttle, this service was removed in 2003 due to low levels of performance.)
- **Specialized Transit** – provide door-to-door assisted service for persons with disabilities; the service is reserved for use by registered users only.

**Current System – Route and Service Types**

To apply these definitions it is important to understand that Brandon Transit fulfills transportation needs within the City of Brandon to residents on a fixed schedule system. The fixed scheduled service operates Monday to Saturday from 5:30 am to 10:00 pm. Under this service umbrella, Brandon Transit offers;

- **Fixed Route Scheduled – Regular**  
Regular Fixed Route Scheduled Service offers both base and local route services within the City of Brandon Monday – Saturday, 6:00 am – 10:00 pm. A profile of routes is outlined below for both Weekday and Saturday Service.

**Weekday Service**

Service Schedule	Base Route Richmond West Route #1	Local Route Kirkcaldy Route #3	Base Route Vic East Route #6	Local Route Rec Centre Route #7
30 Minute	06:00-18:00		06:00-18:00	
60 minute	18:00-22:00	06:00-22:00	18:00-22:00	06:30-21:30
Service Schedule	Local Route 18th South Route #9	Local Route Central Belt Route #10	Base Route City Circular Route #20	Base Route City Circular Route #21
30 Minute	06:00-10:00 14:00-17:30	07:00-10:00 14:00-18:00	06:00-10:00 14:00-18:00	06:00-10:00 14:00-18:00
60 minute	10:30-13:30 18:30-21:30	10:00-14:00 18:00-21:00	10:00-14:00 18:00-22:01	10:00-14:00 18:00-22:00

**Saturday Service**

Service Schedule	Base Route Richmond West Route #1	Local Route Kirkcaldy Route #3	Base Route Vic East Route #6	Local Route Rec Centre Route #7
30 Minute	06:00-22:00	06:00-09:30	06:00-22:00	
60 minute		10:30-21:30		10:00-21:00



Service Schedule	Local Route 18th South Route #9	Local Route Central Belt Route #10	Base Route City Circular Route #20	Base Route City Circular Route #21
30 Minute			06:00-10:00 14:00-18:00	06:00-10:00 14:00-18:00
60 minute	06:30-21:30	06:00-22:00	10:00-14:00 18:00-22:01	10:00-14:00 18:00-22:00

### Fixed Route Scheduled – Industrial

Industrial Fixed Route Scheduled Service offers shuttle/overload route services Monday – Friday, 5:30 am – 2:00 am. These routes operate mainly at peak demand times, driven by shift start and finish times. A profile of these routes is outlined below for the Weekday Service.

### Weekday Service

Service Schedule	Shuttle Industrial #11	Shuttle Industrial #12	Overload B (26 <sup>th</sup> )	Overload E (Argyle)
30 Minute	06:00-10:00	05:30-07:30	05:30-06:00	05:30-07:30
30 minute	13:30-17:30	14:00-18:00	15:30-17:30	15:30-19:30
			24:00-02:00	24:00-2:00
Service Schedule	OL – Route 3			
30 minute	06:00-06:30			

- **Charter Service**

Finally Transit Charter Services are offered within the City of Brandon at a fixed hourly rate, seven days per week. Charter Services are generally requested in support of point to point transportation for special events.

### Challenges with Current Route and Services

The current fixed route structure operates on a half hour schedule based from the Downtown and Richmond Terminals. These routes operate predominantly in wide sweeping east/west loops, with narrow north and south loops to reach City extremities. As in traditional transit system coverage profile, the system experiences high levels of overlap near the systems terminals. Relative to other transportation systems, the system offers reasonable transportation timelines given start and finish destinations within single route coverage, however these timelines often stretch significantly should start and finish destinations require transfers at one of the transit terminals. The application of Express routes to combat this is difficult to apply given current route structure and the locations of the major passenger generators.

The pillars of the current route structure are the City Circular routes, where at implementation offered service to the four high schools, the hospital and the major shopping venues (downtown and the Brandon Shoppers Mall) from all four corners of the City. The development of these routes was partly to focus on student riders, and to develop the potential for a partnership with the Brandon School Division. To date, this concept has not developed fully, and secondly these routes no longer link all major shopping opportunities with the introduction of the Corral Centre.



These issues will challenge Brandon Transit in terms of the alignment of current and potential new rider needs with the existing service offerings. Route structures need to be reviewed to consider current city development, the location for primary passenger generators and to anticipate and address the areas that are expected to experience significant growth in the future such as on or around the North Hill.

### **Performance Standards**

Another building block of the strategy is in defining the performance expectations of routes. By defining these standards it allows all parties to identify the routes that are adequately performing and to investigate opportunities to increase performance in other underperforming routes. This analysis in conjunction with the desire to target specific demographic groups will allow for a comprehensive solution to increase the number of riders. The performance standards are outlined below.

- **Service Span** – Defines the operating hours for the services. Base routes shall operate the maximum span of service hours. All other routes operate during hours where service is warranted according to performance standards.
- **Level of Service** – The level of service defines the minimum frequency at which a route operates. Routes unable to meet the minimum performance standards at the minimum frequency should be reviewed for alternative service delivery models. Base Routes shall operate with a minimum frequency of 30 minutes during weekday periods, and 60 minutes on evenings and weekends.
- **Vehicle Loading** – Defines the average number of passengers to be accommodated on buses during the peak hour of the relevant operating period. Service where this average is exceeded should be increased to reduce the average passengers per vehicle.
- **Route Coverage** – Brandon Transit should consider new or revised routes to service residents, places of work, secondary and post-secondary schools, major shopping centers and public facilities in the urban area that are beyond a 400 meters of a bus stop during daytime hours and 1000 meters of a bus stop during all other service hours. Areas within this standard may be considered for improved service based on performance criteria.

### **Current System and Challenges – Performance Standards**

Information related to service span and level of service has been quantified under the route and service information outlined above. In regards to vehicle loading we know:

Industrial fixed routes operate at defined levels of service, and vehicle loadings. The system capacity is viewed in the range of 80 vehicle boarding's per hour. The current offering averages in the range of 60 vehicle boarding's per hour at peak times, however on the same route there can be significant swings in boarding numbers on a trip by trip basis. As a result of this, service offerings must be monitored closely to mirror the shift start and end times with adequate overlap to service minor isolated shift changes.

Regular Service averages in the range of 25 vehicle boarding's per hour.

Bearing the vehicle loading concept in mind, any base or local route system operating below the defined vehicle boarding per hour goal offers the potential for increased revenues through ridership improvements.



With respect to route coverage, we recognize that we do not have a system or a model that easily quantifies information on a continual basis so that adjustments can be defined and then tested to understand the impact on the system and on ridership levels. As a result, there has been little ongoing work related to route coverage and its impact on ridership. It is important to understand that route coverage can and will affect the vehicle loading concept. For example route coverage with multiple primary passenger generating locations will experience higher vehicle loadings, and thereby potentially feed other local routes within the system. In order to ensure efficiencies within the routes, it is helpful to understand specific stop performance to allow for improvements within the system. Stops with low vehicle loading rates may be removed to accommodate additional stops within the primary passenger generating corridors of industrial and or residential neighborhoods.

In an effort to gather both stop and route specific information, transit authorities across the country have chosen to implement transit ridership/boarding information gathering systems in an effort to better understand performance within the route structures. More recently, these “smart systems” have grown to meet the needs of smaller market transit authorities, making them affordable and flexible enough to meet demands of specific systems. Brandon Transit must endeavor to understand the vehicle loading of the system, and secondly develop understanding of how we may impact or promote increased operating efficiencies through implementation of service standards specific to our systems needs.

### **Auxiliary Services**

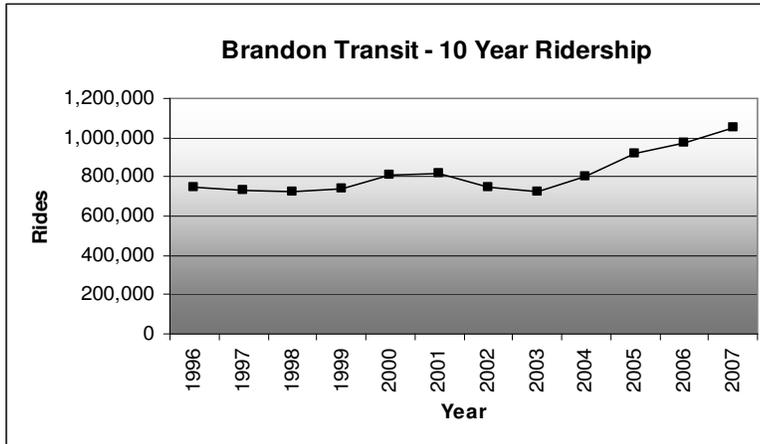
The final building block that needs to be considered is developing a service strategy is to explore the issue related to auxiliary services that are offered as part of this system. In Manitoba, one of the biggest issues is related to the impact that weather has on using the system. We receive a number of complaints and requests related to bus stop locations, snow removal at stops and the need for shelters. As a component in setting out standards for routes, we know that establishing standards on these auxiliary services will also be critical in meeting the needs of existing riders and in attracting new riders to the system.

## **2.2 Demographics**

Throughout the late 1990s and stretching into 2004 the ridership levels were stagnate at approximately 800,000 riders annually. The introduction of Maple Leaf and the move by that company to increase activity related to attracting immigrants to the community, in concert with the relocation of military operations into Shilo has resulted in a steady increase in the level of ridership. In 2007 based on the current trends, it is anticipated that ridership will be in excess of 1,000,000 rides for the year.



## Brandon Transit - 10 Year Ridership



In order to develop strategies to meet or improve the existing service to current users and that will identify how to attract new users it is important to look at a cross section of current users over time to identify possible trends. These trends will help to identify areas of growth or opportunity. It is also important to understand the demographics of our community to provide a basis for where growth opportunities may exist. The chart below highlights information that was gathered as part of the 2001 Census.

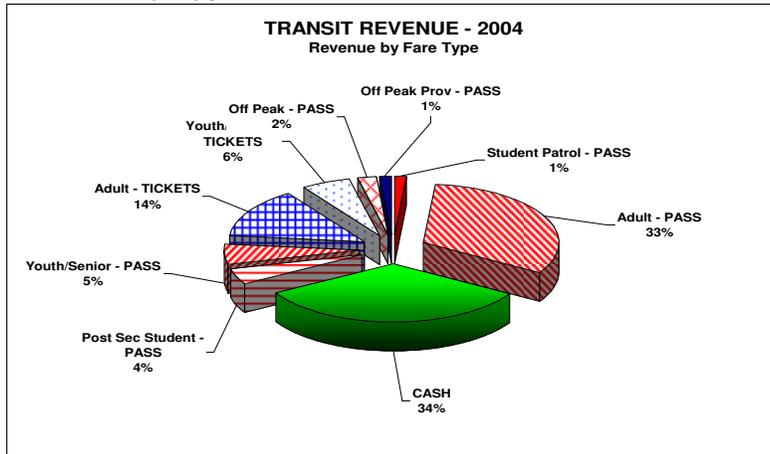
### 2001 Census – Age Characteristics of the Population

	Total	Youth	Adult	Senior
Age 0 – 4	2,295	2,295		
Age 5 – 14	5,025	5,025		
Age 15 – 19	2,950	2,212	738	
Age 20 – 24	3,440		3,440	
Age 25 – 44	11,240		11,240	
Age 45 – 54	5,135		5,135	
Age 55 – 64	3,320		3,320	
Age 65 – 74	2,920			2,920
Age 75 – 84	2,465			2,465
Age 85 and over	930			930
Median age of the population	36.6			
<b>Totals</b>	<b>39,720</b>	<b>9,532</b>	<b>23,873</b>	<b>6,315</b>
<b>Percentage of Total</b>		<b>24%</b>	<b>60%</b>	<b>16%</b>

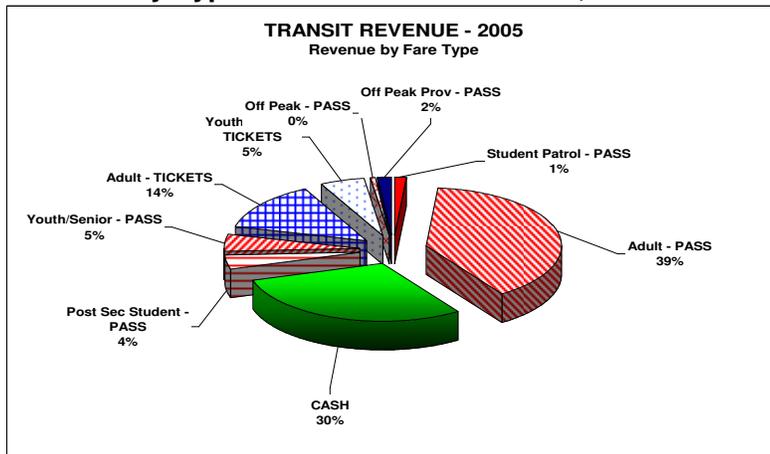
The three charts below depict a cross section of riders over the last three years. There has been a slight increase in the percentage of revenue generated through the sale of Adult Passes with a corresponding decrease in the percentage of Cash Sales and Youth / Senior Pass Sales.



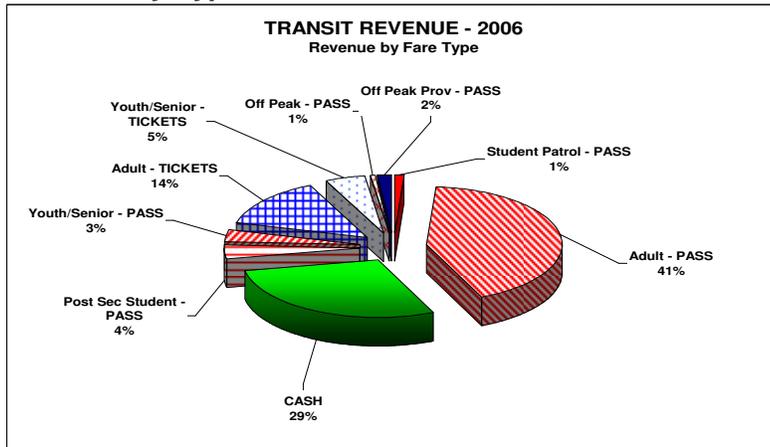
## Revenue by Type of Revenue 2004 – \$819,000



## Revenue by Type of Revenue 2005 – \$962,000



## Revenue by Type of Revenue 2006 - \$1,043,000



## Adults

In looking at these charts it is evident that nearly all the revenue and rider growth with respect to Brandon Transit's Scheduled Fixed Routes has come from the sale of Adult Passes. In breaking down this segment further, it is evident in the chart below that a significant portion of that growth has been the result of the Industrial Ridership segment.

**Adult Pass Sales – Industrial Pass Riders versus Total Pass Riders**

Period	Adult Pass Total	Industrial Total	Percent of Total
1st Half 2004	2898	1020	36.85 %
2nd Half 2004	2747	1003	39.47 %
1st Half 2005	3098	1481	57.34 %
2nd Half 2005	3743	2278	60.86 %
1st Half 2006	3949	2495	63.18 %
2nd Half 2006	3813	2351	61.66 %

The increase in ridership in this sector coincides with the introduction of immigrants to the Maple Leaf operation and as such has remained relatively stable over the last couple of years. We anticipate with the introduction of second shift we will see another jump in the percentage of the total associated with Industrial Ridership that will coincide with the additional workers coming on line. Maple Leaf is targeted to recruit an additional 300 immigrant workers to the Brandon Plant in 2007 and will continue to recruit through 2008 and 2009 to fill the second shift requirements. Under the existing service umbrella, the Industrial Service offers riders a shuttle service to and from key locations within the City directly to the Maple Leaf Plant with little need for transfers or delays. Many of the Industrial Riders have moved from societies heavily dependant on transit systems for significant aspects of their day to day lives and due to their limited ability to attain driving privileges this market is somewhat captive. Outside of employment needs there is little known about the transportation activities of this group as it relates to everyday activities and to their families. We believe that there maybe barriers associated with language, culture, and family affordability and it will be important to understand how to modify existing training, systems and education of transit employees to meet the needs of this group. As immigrants bring their families to the community it will be important to have systems in place that will encourage the immediate use of the transit system as a means to assist them to acclimate to the community.

Adult Pass sales, independent of Industrial Ridership per year was at approximately 1800 in 2004 and has dropped to 1450 passes in 2006. At this point it is unclear the reasons for this drop, but we do understand that we have experienced a significant change in the demographic of the riders. Prior to the introduction of the Industrial Rider, we know that the typical pass holder would have generally fallen into lower income brackets. Typical ridership needs would have been driven by the attendance of day programming, volunteer programs and employment. While this is still the case, we also know that the drop in ridership in this area coincides with changes in the location of retail development and industrial development in the community. Significant changes have already been made to compensate for changes in the industrial areas and as a result we have experienced significant ridership increases. These changes include direct express



transit service to the Maple Leaf Plant ensuring quick access to work. While some changes have been made to service the new retail areas, it is unclear whether these changes have truly satisfied the users in this sector. Due to the longer operating hours of retail outlets, we believe that a contributing issue maybe that the service does not operate long enough in the evening to allow users to get home if a downtown transfer is required.

There is significant opportunity to have workplaces become involved in campaigns to have employees consider transit as their transportation to and from work. In the last year a test group of City employees were used to participate in a focus group to provide feedback to Brandon Transit on areas such as route structure, ease of use, barriers, etc. This information is being used to develop information packages and employer programs for roll out in the future.

### **Seniors**

Despite the recent transit ridership increases, this segment remains relatively flat as it relates to growth. With 16% of the population being represented by this group there should be some growth opportunities targeted in this area.

In a study that was done in partnership between the Beverly Foundation and The Community Transportation Association of America they identified the following issues as being barriers for seniors in using transit systems:

- concerns about safety
- inability to pay the costs
- unaware of existing options
- not able to walk to vehicle
- difficulty in getting into the vehicle
- not able to travel alone
- fearful of getting lost
- it is not senior friendly

A significant number of today's seniors in fact used to ride the bus as children if they grew up in this community. As they matured into adults one of the significant purchases that most aspired to at the time, was in owning and operating a vehicle. While the automobile had been around for a number of years, they became much more attainable and affordable to own after the 1920s. This said many families did not start having multiple family vehicles until the 1950s and 1960s meaning that many children rode the bus in their youth.

Operating a vehicle has been and is tied with the ideal of independence. For a lot of people, not just seniors, there is a perception of a loss of this independence when being reliant on a transit system. The challenge in attracting this ridership group will be in overcoming the ongoing desire for independence and in doing so address a number of the issues identified above.

### **Post Secondary**

The City of Brandon has two major post secondary institutions and numerous other smaller adult learning centers in the community. All facilities receive high levels of service during peak operating hours, but the service is either reduced or discontinued during evening hours. This segment represents a small percentage of current users and



with over 5200 full time student enrollments in our post secondary institutes we believe that there is opportunity for growth in this area.

Passes are available for purchase at the two major post secondary institutes and through other areas of the community. The chart below gives a breakdown of sales at these locations.

**Post Secondary Pass Sales - Totals by Year**

Year	Total Passes	Assiniboine Community College	Brandon University	Other Sales Locations
2004	853	286	210	357
2005	828	254	220	354
2006	855	217	120	518

If we assume that each student will purchase 8 passes over a year, we can derive that we currently have approximately 107 riders or 2% of the full time student population using the service. The opportunity increases if we consider the potential to attract part time students as well.

In reviewing the complaint / feedback database, one of the barriers in attracting this segment is the limited service hours required to permit student transportation via transit for employment and evening course requirements. Current service offerings limit the post-secondary student's ability to rely on Brandon Transit as a primary transportation service due to evening service cut off at 10:00 pm. Specifically, students do not have the ability to utilize transit for evening coursework or employment requirements as service cut off generally precedes travel requirements.

There are a number of other issues that impact Brandon Transit's ability to attract riders in this segment. The City's post secondary institutions service students throughout south western Manitoba and as such, many choose to commute to and from their home communities into Brandon. These students would not consider transit as a solution because of their existing need of having a car to make the commute. A third issue is the fact that many students choose to live in areas adjacent to the institutes and in these cases often do not require vehicle transportation to meet their educational needs. Finally students are often financing their education through accessing student loans, borrowing or family support and at times may not have the resources available to them to purchase transit passes.

**Youth**

Youth makes up a very small portion of current users. In the past this group was a more predominate segment but with the economic and social changes that have occurred over the years, we have continued to see a decline in this segment. In the past youth would use transit because families often didn't have multiple vehicles and there was little issue with community safety. Youth often knew of parents, family or friends that used the service and as such it was somewhat of a community norm to use transit. We now see multiple vehicles owned by family units, parents are far more willing and can afford to drive their children to activities and events, finally parents and grandparents do not generally use the system and as such have no dependence on, or provide little example for their children to use it. To some degree we have become a society of immediacy and convenience, whereby transit is often perceived as being slow and inconvenient.



The one area where there is some possibility to increase riders is to create a partnership with Brandon School Division to transport “in city” senior students. Currently the Brandon School Division has a policy where “Grades 7-12 students living within the City and having more than 2.4 kilometers to walk in order to reach the designated school attended shall be provided with school bus transportation services.” As part of a joint study that was conducted by Entra Consulting in 2002, one of the recommendations was for Brandon Transit to institute a circular route between the senior schools that would then eliminate the need for the Brandon School Division to operate their service. Brandon Transit did in fact implement this service in 2003, but to date have not been able to establish an agreement with the Brandon School Division to change over their service. In discussions with the division, they have cited safety of their students as being one of their concerns in implementing the change. We believe that the cost of our current passes may also be a contributing issue and we would be willing to look at options with the division to resolve this as a barrier.

In 2006, Brandon Transit launched a pilot project in conjunction with the Brandon School Division in an effort to provide transportation services to all students in Industrial Arts and Home Economics programs. These programs require students to travel from their home school to differing school locations across the City. The launch of this pilot program offered free transit to students traveling to these programs. This project has experienced a 24% uptake since its inception, whereby in excess of 3,500 rides were accommodated on Brandon Transit from September to the end of December 2006. We believe that this program has proven that Brandon Transit is a safe alternative for parents and students, that youth will in fact ride the bus and are able to maneuver issues such as routes and stops. Programs such as these promote transit as a healthy and environmentally friendly transportation option thereby creating opportunities for potential long term riders. Brandon Transit must continue to pursue partnerships such as this in an effort to increase our rider and revenue base.

### **2.3 Fares**

Over the previous decade, transit authorities have been under increasing pressure to obtain adequate fare revenues as a measure of combating decreasing government funding and system costs. As part of this, transit authorities have relied on fare elasticity calculations as a means of understanding increased fare impacts to ridership.

Traditionally there have been two choices when considering fare elasticity's, one being the Simpson-Curtin formula, and the second involved developing a model specific to the local system. Due to the significant effort and time associated with developing these models it often impacts implementation timelines. As a result many of the benefits are not recognized because the model is circumvented in favor of actual implementation. The Simpson-Curtin formula on the other hand is 30 years old, provides no distinction between large and small cities, or peak and non peak operating hours. This formula postulates a fare elasticity of  $-.33$ ; or a 10 percent increase in fare will result in a 3.3 percent decrease in ridership.

Recently, an extensive study by the American Public Transportation Association undertook a fare elasticity review, and has found that small market transit authorities (cities with populations of less than 1 million) are far more responsive to fare increases than those in larger cities. The average taken by this study is  $-0.43$ , or a 10 percent



increase in fare will result in a 4.3 percent decrease in ridership. The impact is even greater in non peak hours, whereby -0.48 was represented.

In early 2000, Brandon Transit made a move to increase cash fares significantly, in an effort to encourage Pass sales. The intent of this initiative was to reduce the handling and counting of fare box cash, redirecting to sales outlets. Part of this was driven from an established guideline to attempt to collect fifty percent of the system's total operating cost at which point the fares represented thirty five percent of total operating cost. This practice was reinforced in the 2002 Entra Consulting Report. As was demonstrated in Section 2.2, Brandon Transits ridership base has communicated sensitivity to the cost per ride through an increase in Adult Pass Sales by 8 percent, (2004-2006), while walk up cash fares have declined by 5 percent as a result of these changes. The chart below highlights fare changes since between 2002 and 2007.

**Brandon Transit Fare History**

<b>Fare Type</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Pass – Adult	50.00	50.00	55.00	58.00	58.00	60.00
Pass – Youth / Senior	39.00	39.00	43.00	47.00	47.00	49.00
Pass – Post Secondary	42.00	42.00	48.00	50.00	50.00	52.00
<b>Fare Type</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Ticket – Adult	13.00	14.00	14.00	14.50	15.00	15.00
Ticket – Youth / Senior	10.50	11.50	11.50	12.00	12.50	12.50
Ticket – Post Secondary	13.00	14.00	14.00	14.50	15.00	15.00
<b>Fare Type</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Cash – Adult	2.00	2.00	2.00	2.00	2.00	2.00
Cash – Youth / Senior	1.50	1.50	1.50	1.50	1.50	1.50
Cash – Post Secondary	2.00	2.00	2.00	2.00	2.00	2.00

Noting above, even with a 16% increase in Adult Pass cost in 2006 over 2002 there has been a growth in that segment sales. Whereas with no increase in cash fares over this same timeframe, has resulted in decreased revenues. Through this, it would appear that the majority of Brandon Transit riders are frequent users of the system who have utilized pass systems whenever possible thereby reducing out of pocket costs. Similarly, it could be assumed that the system has experienced reduced usage by riders that would be classified as infrequent or occasional.

More recently, transit authorities have begun reviewing and piloting reduced fare programs that have focused on improving ridership with net revenue neutral or better fare revenue. Brandon Transit must continue to work towards understanding rider demographics and the effect fare structures have on these groups over the long term. As part of this equation, it is imperative to quantify in terms of cost comparisons to other travel nodes (to equate savings to the rider) at which point does transit become viable to the targeted demographic.



## 2.4 Marketing

Operating a successful transit system is dependant on having a customer to serve. As with any company that is providing a service it is important to understand how your service meets or measures up to the expectations of the customer. As Brandon Transit attempts to attract customers from the various demographic groups, it will also be important to understand the current barriers and what additions to the service would entice them to become a customer.

Much of the activity that has occurred through the years has really been focused on advertising of the service and while this has been important it really is only once element of putting in place an effective marketing plan.

### Advertising and Communication

Regular and ongoing communications with the general public, key community groups and agencies, individual businesses and business groups, the school division, elected representative and customers is vital both to hear about issues and areas of concern from them and to provide valuable information and education for them. Conducting open and regular communication in a proactive fashion will create a level of trust and reliability that will help to reduce controversial aspects of service delivery.

Brandon Transit has been working through the process of developing a communication / advertising plan using a number of different avenues:

- Website – information regarding the various programs, the addition of an interactive route system, fares, route schedules, etc.
- City Page – notices on temporary route changes, notices of upcoming meetings, promotions / campaigns, etc.
- Television / Radio – ads that focus on the environmental and economical aspects of riding transit. Public Service Announcements on changes in service and on improvements that is being made to the service.
- Public Consultations / Focus Groups – ongoing monthly meetings with the MLPD (Manitoba League of People with Disabilities) Group, public consultations as proposed changes are being introduced.
- Feedback Logs – an ongoing log has been established and at any time feedback either positive or negative is given to Brandon Transit it is logged on the system. This allows the group to look for trends in service performance, driver performance, route issues, etc.
- Rider Guide / Maps – maps that include route information as a component of the document.
- Newsletters / Notices / Information Boards – information regarding temporary route changes and other general information. Boards have been installed at the post secondary institutes, Maple Leaf, Info Centre, etc. to bring awareness to the service.
- Promotions / Campaigns – working with a number of charitable organizations that helps them to raise contributions at the same time promoting transit in the community ie. Boo Bus (United Way) and Fill a Bus Campaign (Christmas Cheer / Safeway)



The focus of the activity to date has been on the idea that, “if we tell people about our service they will come”. In situations where there is an existing need that has not been satisfied this approach may be quite effective, but when the need has already been satisfied, the approach needs to be focused around convincing consumers that changing will benefit them financially, emotionally, or socially.

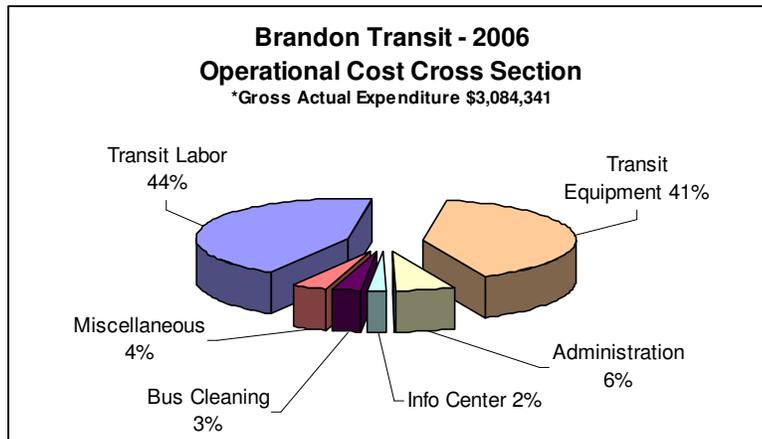
In general, marketing activities are all those associated with identifying the particular wants and needs of a target market of customers, and then going about satisfying those customer needs better than the competition. This involves doing market research on customers, analyzing their needs, and then making strategic decisions about service design, pricing and promotion.

The activity in this area needs to move from promotion and advertising to focus more on understanding the customer needs and wants of the various target markets. Then in combination with the work being done on the service standards and fares they need to provide solutions in satisfying those needs. Brandon Transit will be required to undertake initiatives such as demographic specific surveys/consultations in an effort to understand needs. At that point, these solutions need to be the focus of the advertising, communication and promotion work in order to have potential users consider the system.

## 2.5 Operational Efficiency

In order to continue development, and prepare for potential service growth, Brandon Transit has focused considerable effort over the last few years in gaining better understanding of internal costs and efficiency opportunities.

In 2006, based on a total actual cost of operation (gross) of \$3.08 million, Transit Equipment and Labor combined resulted in 85% of the total expenditures.



### Labor

In 2006 the City of Brandon and the Amalgamated Transit Union negotiated a three year contract for operators and dispatchers of the system. As a result of this recent agreement, and the continued operational efficiency partnerships between administration/operators no labor changes are recommended at this time. Under current operations, the department operates with 26 permanent full time operators, 6 temporary



operators, and one full time permanent dispatcher. As service is expanded in the future, adjustments will be required with respect to both drivers and dispatch services.

### **Equipment - Buses**

Prior to the end of 2005, Brandon Transit operated predominately 40' new and mostly refurbished buses. The levels of Provincial Government funding had remained flat from 1995 through 2005 and with internal pressures to keep operating cost down, the age of the fleet continued to increase resulting in increase operating and maintenance costs. In 2004 and 2005 a budget per kilometer of \$1 was insufficient in terms of total costs of maintenance resulting in budget deficits within the Fleet Services Department. In 2004, the City's cost per ride peaked at \$1.44 / kilometer compounding the difficulty in budgeting for new bus purchases. In this same timeframe, the fleets average age was 16 years, an age where transit authorities are typically planning for disposal or decommission of equipment.

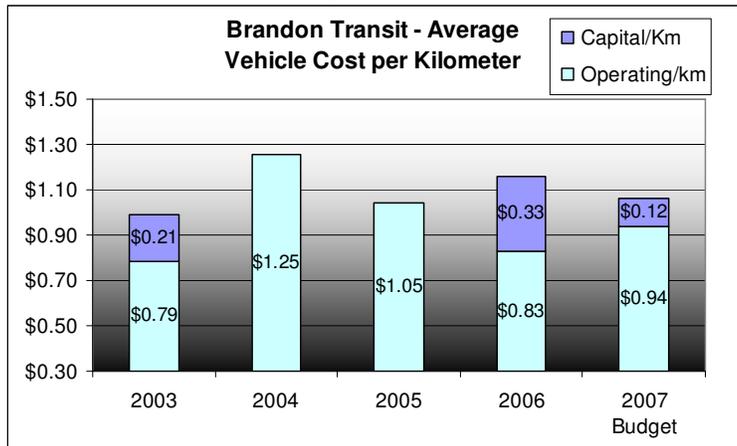
In 2005, Brandon Transit conducted a comprehensive investigation on the different types of equipment that was being used in communities across the country. Through this investigation, it was determined that there were numerous changes that had occurred in the technology and manufacturing standards in the industry. These changes enable Brandon Transit to look at diversifying and "right sizing" the equipment that was being used. At that time a presentation was provided to Council that outlined the potential saving that could be achieved by considering this alternative equipment and technology. With Council approval, in 2006 Brandon Transit introduced 5 Eldorado Aerotech 24' buses from Crestline into regular service which allowed them to retire some of the older and more costly buses from the fleet. The change over to newer more efficient buses has resulted in some significant operation cost efficiencies in 2006. To demonstrate this further, actual cost breakdowns from 2006 operations within the fleet are as follows;

<b>Bus Types</b>	<b>Total Cost Maintenance</b>
40' Conventional Transit Bus	\$1.12 per kilometer
24' Eldorado Aerotech	\$0.47 per kilometer

This said, the fleet continues to operate older buses with a wide range of makes/models creating many difficulties with preventative maintenance programs and stocking of parts. The average age of the 40' buses continue to be of concern as there are a significant number of buses that are approaching the end of their useful life cycle. The following graph contains total cost per kilometer operating data over the previous 4 years. Brandon Transit operated approximately 1.08 million kilometers per year in this time frame.



## Brandon Transit – Cost per Kilometer



The introduction of the five smaller buses has resulted in Brandon Transit now being able to put aside increased reserve appropriations for investment in new capital equipment in 2006 and in 2007. We expect that as newer right sized equipment is brought on line that we will continue to be able to offset at least a portion of cost increases such as fuel prices, while at the same time being able to continue to invest in an appropriate capital replacement plan.

Brandon Transit will continue to strive to employ right sized buses within its entire route structure as outlined in the capital planning section, as well as identify operational efficiency programs and targets.

### Accessibility

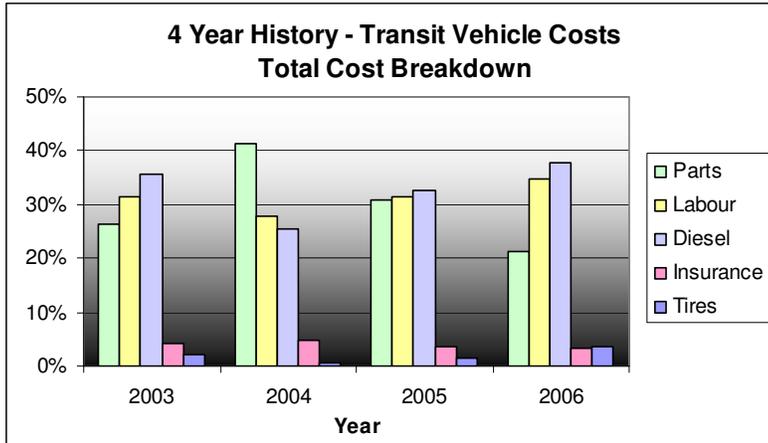
At the time of the decision to introduce the Eldorado buses into the fleet, there was some question on whether this meant that Brandon Transit was moving away from use of low floor or kneeling buses. The initial intent behind purchasing the low floor / kneeling buses was to attract users with mobility issues to the service. While there are certainly some users that benefit from this technology, Brandon Transit did not experience a significant increase in ridership as a result of providing this type of bus. One of the reasons for this is that with the ambulatory ride option currently being offered as part of the Handi Transit service, riders with mobility issues prefer that service over Regular Transit because of its door to door convenience. It could also be argued that because the entire fleet is not comprised of this type of equipment that it limits the benefit to mobility challenged individuals. The initial purchase price of a low floor / kneeling bus is approximately 3 to 4 times the cost of a similar standard bus. At the time the Eldorados were introduced it was recognized that there was a higher need to replace a larger number of the fleet in order to address operating and maintenance costs and in doing so establish a capital replacement fund for the long term purchase of equipment. Brandon Transit recognizes that low floor / kneeling technology remains a factor that needs to be considered in the selection of equipment. It will be important to further understand this as a “barrier to ridership” and through the dialogue that is planned with each of the demographic groups Brandon Transit will be able to place a priority on providing this type of equipment.



### Equipment Maintenance and Operating Supplies

Similar to other transit authorities, parts, labor and fuel are the largest costs associated with the operational maintenance of a transit fleet. As shown below, over the previous 24 months, diesel fuel accounts for the highest percentage of cost in terms of transit vehicle operations.

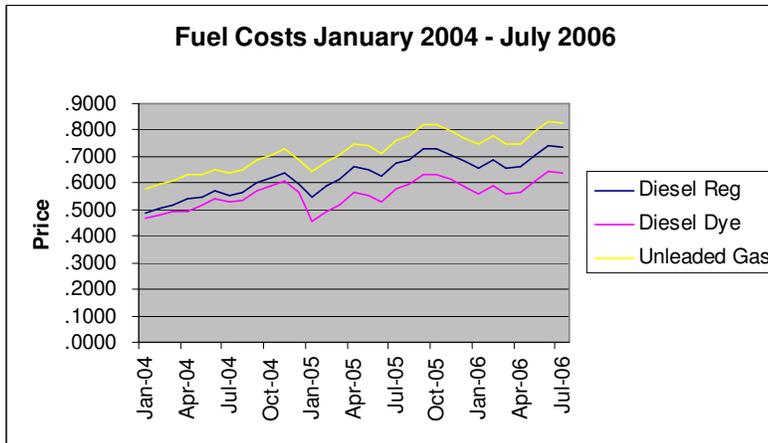
#### 4 Year History – Transit Vehicle Cost Breakdown



The decrease in parts can be directly associated to the implementation of the new right sized buses and given the outlined capital planning program contained in this report the costs of operation in terms of parts and labor will continue to see positive impacts.

Ongoing increases in fuel costs concrete the need for continued planning in fuel consumption reductions. Diesel fuel costs have risen from an average cost of \$.52 per litre in 2003, to \$.71 per litre in 2006 and we can only expect that this will continue to increase over time.

#### Fuel Costs

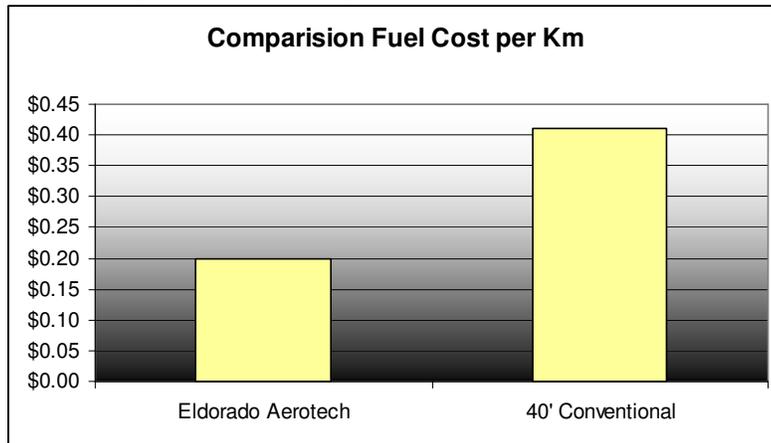


Annually Brandon Transit consumes in excess of 525,000 litres of diesel fuel given current service offerings. Over the previous four years the costs of diesel fuel alone has impacted Brandon Transit costs of travel by \$0.10 per kilometer or \$100,000 annually.



In 2006, Brandon Transit through operation of smaller, right sized vehicles on 5 regular service routes realized significant fuel savings. To demonstrate the actual fuel consumption performance of the 24' Eldorado buses versus existing 40' conventional buses see the chart below.

**Fuel Comparison – Cost per Km**



The smaller Eldorado Buses offer fuel efficiency twice that of the conventional buses within the transit fleet. To concrete the effect in overall fuel consumption rates, in 2006 Brandon Transit traveled 50,000 kilometers further than 2005 yet consumed 26,000 litres less, resulting in reduced total fuel costs. The 2006 impacts are estimated at 42,000 litres saved if the smaller buses had operated for the entire year. In order to combat fuel costs it will be important to continue to secure right sized vehicles, explore alternative fuels such as bio-diesel, bio-diesel blends, hydrogen, hybrid technology and other programs.

While equipment and technology will have a significant impact in reducing fuel consumption, it will also be important to look how driver practices and habits impact fuel consumption. Brandon Transit in conjunction with the Fleet Service Department can further impact cost of fuel and maintenance through the development and implementation of a “smart driver” program. This program would focus on development of smart/efficient driving behaviors. These behaviors have the potential to impact fuel efficiencies, tire wear and brake life significantly. Programs operated by other agencies have realized cost efficiencies in excess of 10%.

**Capital Planning**

Paramount in development of predictable and cost effective vehicle operations is development of an effective Capital Planning Program. Prior to 2006, capital planning for transit vehicle replacement did not entail planned capital payments similar to that of other vehicles within the City of Brandon Fleet. Rather the department paid total per kilometer rates (2003-2005 rates were \$1) in internal equipment rates, whereby at year end favorable balances were applied to the Transit Equipment Reserve. These allocations in combination with Provincial Grants funded the reserve for planned replacements.

The chart below demonstrates the high cost of capital and operating funds that are required and assist in outlining the difficulty the department faced in maintaining



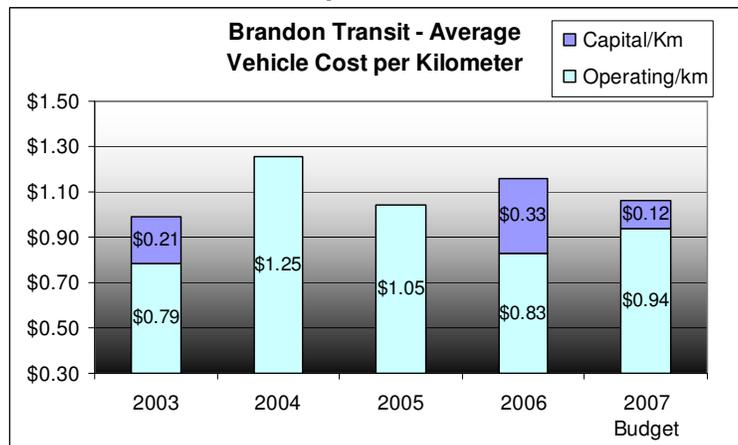
predictable capital reserve allotments over the previous 4 years. In 2004 and 2005 the cost per kilometer rate was inadequate in terms of covering the costs of operation. As a result, no funding was available for allocation into the capital program to assist in covering the high costs of bus purchases. In looking forward the internal equipment rates being charged through the operating budget needs to factor in both the planned vehicle purchase price and the operating costs of the vehicle over its useful life similar to the other pieces of equipment in the City of Brandon fleet.

### Transit Vehicle Replacement – Budget Costs

Vehicle Type	Purchase Price	Life Cycle	Cost Monthly		Total Cost
			Capital	Operating	
24' Eldorado	\$110,000	5 Years	\$1,916	\$2,450	\$4,366
30' Eldorado – High Floor	\$200,000	8 Years	\$2,600	\$3,000	\$5,600
30' Eldorado - Low Floor	\$340,000	14 Years	\$2,800	\$3,000	\$5,800
40' Low Floor	\$430,000	14 Years	\$3,500	\$3,750	\$7,250
40' Refurb Low Floor	\$180,000	6 Years	\$2,650	\$4,500	\$7,150

In the heavy equipment operating environment, it is not uncommon to perform significant refurbishments in order to extend the effective operating life cycle of the unit. Traditionally, Brandon Transit has funded items such as engine/transmission replacements through operating funding. This practice has contributed to the significant deviations in terms of actual year to year operating costs as witnessed in 2004 in the Cost per Kilometer chart below.

### Brandon Transit –Cost per Kilometer



In 2004, Fleet Services performed engine and transmission change outs in the fleet at a cost of \$50,000 for each change out. In order to assist stabilizing vehicle operating rates, identification of significant expenditures such as engine/transmission replacement funding into the Capital Planning Reserve is required. All future bus purchases will include planned expenditures beyond scheduled preventative maintenance and the



funds for these will be planned for through the internal equipment rate charges each month to the Capital Planning Reserve.

Beginning in 2006 with the purchase of five Eldorado Buses, Brandon Transit began the separation of equipment operating and capital charges. The Eldorado Buses, along with all future purchases will have monthly capital payments based on the life cycle costing model.

In 2005, Transit Administration in its presentation to City Council identified both 24 and 30' buses as a required component in right sizing and fleet upgrades. Brandon Transit Fleet Capital Planning/Replacement Schedule has been developed, and previously presented to Council. Within this plan, the department will utilize 24' and 30' for Regular Service Routes, and 40' buses to service Industrial Routes. This Capital Replacement Plan (Appendix A) will support the departments continued efforts in stabilizing actual operating costs of vehicles, and further working towards cost efficiencies.

### **3 Regular Transit Recommendations**

The following is a list of recommendations from each of the elements that were described above. The implementation of these recommendations are planned to occur over the next five years as outlined. A further breakdown of timelines is attached in Appendix D.

#### **3.1 Service Standards**

- 3.1.1 Research the potential for implementation of a Smart System to assist in further developing and monitoring Performance Measures. (2007, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.1.2 Continue to meet and work with the larger employers in the community to ensure that future growth can be anticipated and planned for so that opportunities to increase ridership are not lost. (2007, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.1.3 Evaluate and align Performance Measures as required to ensure Brandon Transit offers efficient, reliable and economical service, which secondly offers measurement data for comparison against other Municipal Transit Authorities. (2007, 4<sup>th</sup> Quarter)
- 3.1.4 Develop service standards related to auxiliary services such as bus shelters, benches, etc. (2008, 2<sup>nd</sup> – 3<sup>rd</sup> Quarter)
- 3.1.5 Development of equipment accessibility standards for transit equipment ensuring typical and target rider demographics ability to access services. (2008, 3<sup>rd</sup> Quarter)
- 3.1.6 Complete a current service standards review/gap analysis in an effort to establish provision of services consistent with the needs of the community and system. (2009, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.1.7 Complete a review and assessment of the existing routes as they pertain to the service (route, performance and auxiliary) standards outlined in this document. (2010, 1<sup>st</sup> – 2<sup>nd</sup> Quarter)
- 3.1.8 Develop a report outlining the current route deficiencies and a proposed plan to address these issues including both operating and capital budget implications. (2010, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)



- 3.1.9 Develop a plan to address future north / south service requirements taking into consideration changes in passenger generating locations. (2011, 1<sup>st</sup> – 2<sup>nd</sup> Quarter)
- 3.1.10 Regular Schedule Service route change implementation. (2011, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)

### **3.2 Demographics**

- 3.2.1 Continue to work with the Brandon School Division to resolve issues related to senior student use of the service and explore other opportunities for savings between systems. (2007, 2<sup>nd</sup> Quarter)
- 3.2.2 Identify and implement tools to reach and understand the needs and “barriers to use” of the desired target markets. (2007, 4<sup>th</sup> Quarter – 2008, 3<sup>rd</sup> Quarter)
- 3.2.3 Develop a profile for each target market and identify strategies including measurement tools that consider changes in service standards and fares to address market needs. (2008, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.2.4 Evaluate the Industrial Riders extended family transportation needs given current accessibility, regular service hours and destinations for potential adjustment. (2008, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.2.5 Identify the service tools (translation services, first time ride “buddy”, etc.) that would assist in overcoming the various demographic barriers and develop or partner with other organizations to offer programs related to them. (2008, 4<sup>th</sup> Quarter – 2009, 1<sup>st</sup> Quarter)

### **3.3 Fares**

- 3.3.1 Develop a comprehensive understanding of the Governmental Models for those in assisted living programs, along with expectations of those models on public transportation systems. (2007, 2<sup>nd</sup> – 3<sup>rd</sup> Quarter)
- 3.3.2 Evaluate the impact of price elasticity on ridership in the community as part of the information gathered under Section 3.2 and provide recommendation to Council on fare changes. (2009, 2<sup>nd</sup> Quarter)
- 3.3.3 Noting the success of the Eco Pass program within other transit authorities, Brandon Transit should endeavor to develop a pilot project through partnerships with large employer bases within the City. (2008, 3<sup>rd</sup> Quarter – 2009, 3<sup>rd</sup> Quarter)

### **3.4 Marketing**

- 3.4.1 Continue to explore and develop tools that allow for ongoing measurement of trends to be able to evaluate the effectiveness of marketing, advertising and communication activities. (2009, 2<sup>nd</sup> – 3<sup>rd</sup> Quarter)
- 3.4.2 Develop and launch marketing campaigns specific to each target markets that emphasize changes and solutions that overcome “barriers for use” issues. (2010, 2<sup>nd</sup> – 3<sup>rd</sup> Quarter)

### **3.5 Operational Efficiency**

- 3.5.1 Continue to support the activity related to the Bio-Diesel project and explore other alternative fuel equipment concepts in an effort to reduce per kilometer costs of operation. (2007, 1<sup>st</sup> Quarter – ongoing)



- 3.5.2 Ensure that monthly internal equipment rates allot sufficient funds into the capital reserves for the replacement of vehicles at the end of their planned lifecycle and for major refurbishment costs during the equipment lifecycle. (2007, 1<sup>st</sup> Quarter)
- 3.5.3 Replace vehicles as per the capital replacement plan presented to City Council (Appendix A) based on a full life cycle costing which takes into account the initial purchase cost of the equipment, the fuel efficiency, the maintenance and insurance costs. (2007, 1<sup>st</sup> Quarter)
- 3.5.4 Continue to develop Performance Measures that will permit Brandon Transit to offer efficient, reliable and economical services, and that secondly offers measurement data for comparison against other Municipal Transit Authorities. (2007, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 3.5.5 Implement a “Smart Driver” program in an effort to develop driving habits to assist in reduction of fuel consumption and brake maintenance costs. (2008, 4<sup>th</sup> Quarter – 2009, 1<sup>st</sup> Quarter)



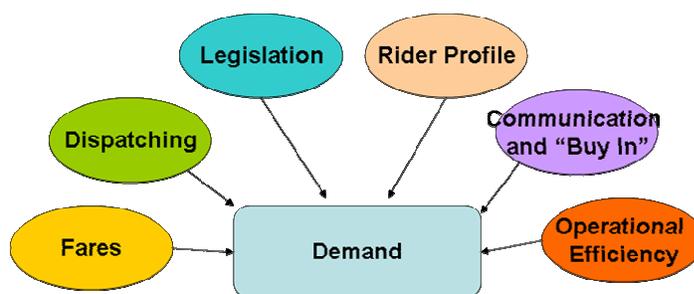
## 4 Handi Transit

Contrary to a regular transit system, the more users a handi-transit system accommodates, the higher the cost of operating the system. This said, as our population ages, we know that there will be a significant need for this type of service in order to ensure that our community remains active, engaged and independent.

We know that the factors that are considered in making the decision to use this system are quite different from those considered in using a regular transit. In a number of cases, the decision is not around whether or not to use the system, but whether or not to leave a home, attend a doctor's appointment or to be active in the community. There are few options for individuals that require assistance and depending on their type of mobility device there may only be the option of Handi Transit capable of meeting their needs. Over the last couple of years a number of senior's residences, the RHA and many taxi companies have decided to move away from providing this type of service and as a result have limited the transportation options for this entire segment of our community.

For any Handi Transit system, the toughest element to manage is the demand for the system whether that be at peak times or not. The user's need for the system (or demand) is dependant on specific individual factors such as time of day, events that may be happening in the community, medical appointments, work requirements, friends or family time and obligations, etc. The culmination of each of these individual factors over the entire user base feeding into one system is where the challenge exists. How do we meet all of those needs (as close as possible) and balance that against the cost of providing a service?

We can not, nor would we want to control the individual factors that lead an individual to want to use the system, however there are a number of elements that we can influence in order to be able to better anticipate and meet demand requirements. The diagram below outlines those elements.



In the following sections, we will explore each of these elements in order to provide the basis for our overall system recommendations. It is important to note that while each of these elements impacts demand, they also can have an impact on each other. As in the case of Regular Transit, this too is a complex system and a change in one may have a resulting change in another one. In exploring each element we will attempt to identify how they impact each other and make recommendations that take into consideration all elements.

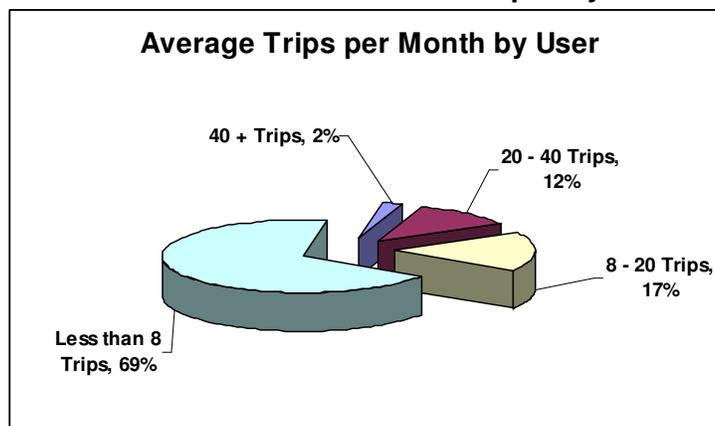


## 4.1 Rider Profile

In December 2006, Brandon Transit in conjunction with the Manitoba League for Persons with Disabilities (MLPD) Handi Transit Advisory Group distributed a survey to the existing Handi Transit Clients. The survey was returned by 72% of the active clients and as a result provided us with the following information. There are almost three times as many female clients (72%) to male clients (28%). Of that client base, we know that 56% of the clients are over the age of 75, 35% are between the ages of 46 and 75 and that 9% are between 18 and 45 years of age. Further to this 71% of all Handi Transit users require wheel chair/mobility aid transportation requirements, while the remaining 29% are classified as ambulatory users. The transportation needs of the ambulatory user can generally be accommodated via cars or vans with door to door assistance.

The chart below depicts a break down on the frequency in which the service is used as a percentage of total users, derived through a snapshot of recent actual usage. It is important to note that this usage profile includes only those registered users that accessed the system in this period, nearly 50% of the registered user data base did not access services over the eight week period.

### Brandon Transit – Handi Transit Frequency of Use



From this chart we can see that most users, a total of 86% of the active users total trips are moderate or even infrequent at roughly equal to one trip or less per day of available service, while 12% of users accessed service roughly equal to 1.7 trips or less per day. In contrast to this, 2% of the users accessed service equal to 4 trips per day or less. To put these statistics into perspective, 14% of the users have accessed 52% of the total trip availability. In order to compare this over time, the average number of times a user accesses Handi Transit per month across the general user data base is 8.25 trips per month currently, up slightly from that of 8 trips per month in 2005.

### Demographics

The users of the system are those that experience either a short or long term disability / mobility issue that can be attributed to factors such as age, health, circumstance, etc. As mentioned earlier in this report, 16% of the Brandon population was identified as being over 65 years of age in the 2001 Census. In 1996, there were 152,165 citizens over the age of 65 in Manitoba. This represented 13.6 percent of the population. With a majority of baby boomers retiring or retired, our senior population is projected to



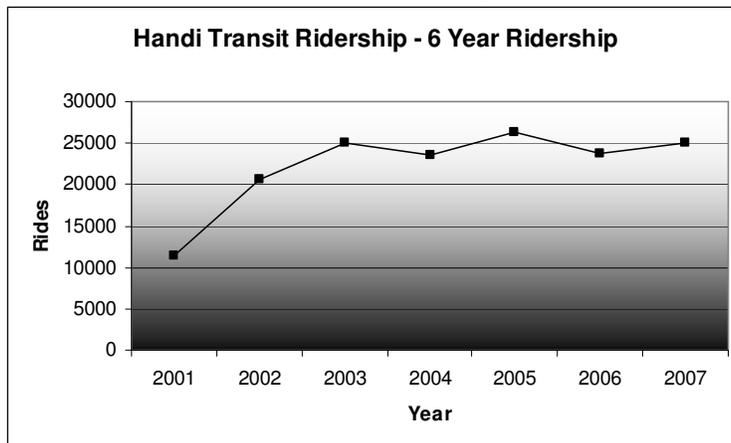
increase to 231,200 between the years of 2011 and 2021. The growth in the numbers of seniors is occurring not only because of the aging of this population segment but also because of the increased life spans of both men and women. The overall health and the well-being of seniors have shown continuing improvement throughout the century. Life expectancies continue to increase as seniors overall health status improves. In conjunction with these changes in demographic, we also recognize that many seniors are moving into urban centers to take advantage of the amenities located in these areas including but not limited to the access to health care.

The most recent demographic information available (the Statistics Canada 1991 backup tables for Manitoba of the Health and Activity Limitations Survey) tells us that 17.6 per cent, or 183,635 Manitobans are disabled. Aboriginal Manitobans are particularly affected with over 25.8 per cent reporting a disability.

As one might expect, the elderly have a high likelihood of being counted among those with disabilities. But younger people are also amply represented: 8.2 per cent of those 15 to 34 years have disabilities, as do 13.8 per cent of those 35 to 54 years of age. Many of these individuals face significant barriers that prevent them from full social and employment participation. The result is that Manitobans with disabilities are much more likely to live in poverty than Manitobans in general. Equal access to education, training and support programs certainly increases their potential for employment and a better overall economic and social future.

Another trend that will impact the level of ridership in the future is the reduction of service being provided by health care institutions. In the past the RHA, including many of the personal care homes operated Handi Transit services for their patients / clients. As we know the cost of providing this service is high and as budget pressures and demands came into play, these institutes made decisions to contract these services out to operating groups, or eliminate the service entirely. As a result we expect to continue to see growth in the service specific to transportation for medication treatment / appointments. The chart below represents the number of rides / year that Brandon Transit has provided to the community. While it appears that the rate of ridership has remained relatively flat in the last couple of years it is important to note that these numbers do not reflect the rides provided from other services; personal care homes, taxi services, family, day programs, etc. that are not booked through Brandon Transit Dispatch.

**Brandon Transit - 10 Year Ridership**

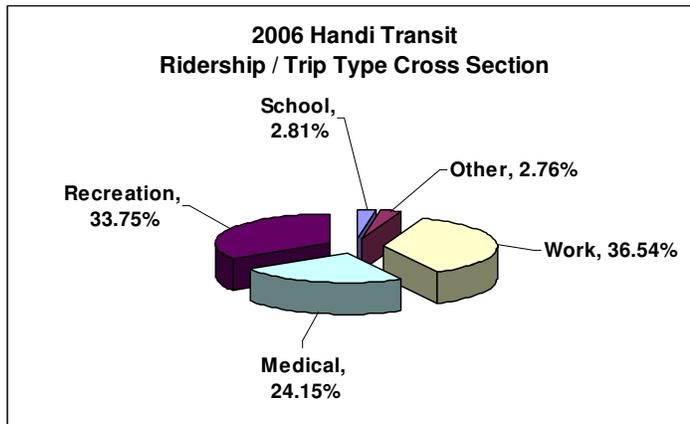


The last issue that will impact the level of ridership is whether or not local contractors will undertake the business of providing this service. Until February 2007, there had been a least one contractor in the community that provided wheel chair service on weekends, late in the evening, on holidays and under various contracts. At this time, Brandon Transit is the only one providing the wheel chair service and as a result has experienced an increase in the level of ridership. There continues to be a contractor who provides ambulatory service under a contract with Brandon Transit and this will be discussed under the Contract Section further on in this document.

**Trip Types – Rider’s Needs**

Frequency of use is driven by the activity level of the rider within the community at large. The needs are driven by many factors and opportunities, the most common trip types involve medical, work, education and recreation. The following graph highlights trip types in an effort to understand user needs, and subsequently control by the user in the timing of trips. As can be seen, nearly 64% of all trips are in support of medical, work or school. In the cases of medical, a significant percentage of bookings occur on a subscription basis to cover needs such as hemo-dialysis. A significant portion of trip booking times are relatively inflexible, or at least as related to our users – these trips are generally pre set by day programs, appointments, work requirements, etc. To concrete this, under current operations it is estimated that 70% of all trips occur between the hours of 9:00 am and 4:00 pm, or within 38% of the regular service span.

**Brandon Transit – 2006 Handi Transit Trip Type Cross Section**



As disabled members of our community become more active in our community, the need for peak transportation capacity will continue to increase. In order to further impact capacity at peak, Brandon Transit will be faced with two options. One will be to work with the larger scale programs and groups in an effort to develop transit friendly time schedules, in and around peak capacities when possible. This may include entities such as the Provincial Government, Regional Health Authority and other Day Program sponsors. Given the time and resource requirements needed to impact changes within these programs the results may yield low level cost benefit. The second option involves the augmentation of service and resources, balancing the need with demand. This will require the understanding that even with comprehensive planning the opportunity will exist for inability to reasonably accommodate a number of trip requests at peak demand. At the time this review was completed, the existence of a private Handi Transit service option is not available to residents of Brandon. This said, when the capacity of City



operated services is reached, or on days that Brandon Transit handi services are not in operation, transportation needs outside of ambulatory users will be limited or non-existent. At current, ambulatory users of the system may access one of the private taxi companies for provision of transportation of services.

## 4.2 Legislation

Public transit in cities across the country is fundamental in providing opportunity for many people to participate meaningfully in the life of their communities. As mentioned earlier, in the case of Handi Transit, transportation is used to access employment, education, public and social services and community activities. As such, in many provinces and states, legislation has been levied that regulates and or governs service availability and standards. Generally, governing bodies, advocacy groups and transit authorities have debated the concept of Regular Transit being run parallel to Handi Transit.

As Handi Transit costs are in direct proportion to the numbers accessing the service, and provide a door to door scheduled service – arguments exist that the service differs from that of Regular Transit. As a result of the increased per ride costs of Handi Transit with comparison to Regular Transit some authorities have initiated fare schedules that follow this notion. In an effort to ensure service to the majority, Brandon Transit has implemented a fee structure that offers a base cost for trips to a maximum of 60 per month, and increased costs for all trips above this threshold. Balance and justification between fare schedules in both Regular and Handi Transit applications are delicate, and depending on the amount they are differentiated, may be viewed as approaching discrimination with respect to the Human Rights Codes. In the end, it is the system that is responsible to balance capacity demand issues. The balance of maintaining readily available capacity to users of the system when and as required can be viewed as onerous at times in terms of required resources and cost, it is still a critical component to ensuring the vibrancy of a community.

Over the past number of years, the Provincial Human Rights Commissions across Canada have received numerous complaints against transit providers alleging that aspects of their respective transit services infringe on the right to equal treatment with respect to services on the grounds of disability.

Under the Manitoba Human Rights Code, **Section 13(1) Discrimination in service, accommodation, etc.** “No person shall discriminate with respect to any service, accommodation, facility, good, right license, benefit, program or privilege available or accessible to the public or to a section of the public, unless a bona fide and reasonable cause exists for the discrimination.”

In the Province of Ontario, many transit authorities had taken the position that the Handi Transit service operating in their respective community is a “special program”.

Specifically in Ontario, Special Programs receive considerations under Section 14 (1) of the Ontario Human Right Code

“A right under Part I is not infringed by the implementation of a special program designed to relieve hardship or economic disadvantage or to assist disadvantaged persons or



groups to achieve or attempt to achieve equal opportunity or that is likely to contribute to the elimination of the infringement of rights under Part I.”

In a Position Paper released by the Ontario Human Right Commission reviewing Handi Transit claims for special programs the Toronto Transit Commission, and Cities of Hamilton, Windsor and London were all denied access to the Special Program designation. Further to this, it was recommended that the commission exercise its declaratory authority under section 14(2) of the code against all authorities.

It is important for Brandon Transit to continue to monitor the changes in legislation across Canada and United States in order to anticipate the changes that may occur in legislation here in Manitoba. It appears that in some cases Manitoba may be lagging behind other communities and we need to ensure that our system modifications leave us in a position to be able to address changes that may be legislated in the future. It will also be important to continue to work with local groups and users in an effort to develop programming suitable to the majority, ensuring compliance and sensitivity to human rights and legislative requirements. As demand increases, the importance of working to educate and partner with agencies/programs within the community in improving efficiencies of shared ride and trip availability will be critical. Historically, human rights issues and complaints are driven by individuals and or groups against those organizations they view as discriminatory. Brandon Transit must continue to support transparent consultative processes that ensure the needs of the residents and community at large are presented and met with respect to access to affordable transit for the users of our systems.

### **4.3 Dispatching**

Dispatch services supported by Brandon Transit, similar to other areas within the transportation industry have undergone significant shifts and changes in terms of required services and support. Currently, the office is responsible for dispatching and coverage of all Regular Transit and Handi Transit requirements, including the scheduling of each demand and subscription trip/booking. Demand bookings are those of short notice, or not reoccurring over a set time period, whereas subscription bookings are those that reoccur over a time period such as daily work travel. The dispatching staff is frontline in dealing with Handi Transit users, primary care givers and support staff, and therefore is instrumental in ensuring consistency of policy and customer service. As the demand on this office has grown, so has the need for policy and efficient resource allocation. Under current operations, the Handi Transit Dispatch Office is operational 5:00 am through to 4:45 pm Monday to Friday, and closed on Saturdays. The Brandon Transit Info Center fields all calls between the hours of 4:45 pm and 7:00 pm, Monday to Friday, and 9:00 am to 7:00 pm on Saturdays (via call forward from the Handi Dispatch office). As a result of Handi Transit operations extending beyond the scope of the dispatch hours, an emergency on call phone is in place with the operator to field various emergent need issues.

The dispatch office in acting as the primary Handi Transit scheduling and information sharing point within our system, yields in the range of 100 calls per day. At this time, calls range in nature from that of booking, canceling, changing or confirming bookings, to that of general enquiry and information sharing. The typical schedule per day



manufactured by the dispatch office ranges from 100-120 trips, covering both ambulatory and mobility aided riders.

Traditionally the scheduling of the daily trip manifest was labor intensive in terms of batching and review of trip compatibilities, and as a result the booking of shared ride trips was difficult to accommodate. The schedule was accomplished through the use of a Lotus Notes based system which was developed at a time when Handi Transit was experiencing demand of 50% of current levels. The system intent was primarily for client information management and scheduling of clients within 20 minute windows to the City and contractor operated vehicles. The scheduling process involved labor intensive batching and review of scheduled trips, to ensure efficiency and compatibility on a trip to trip basis. The schedules were often inconsistent as a result of varying degrees of skill and experience within the office. A secondary problem within the system was difficulty in accessing and maintaining trend, usage and client data within the system.

In November 2006, Brandon Transit introduced and launched Trapeze Groups NOVUS Management Software. The software, a GIS Map based scheduling and Client Information Management tool will assist Brandon Transit in maximizing efficiencies and the customer serviceability of the system. The software has been identified as a best of breed program that specializes in Handi Transit Scheduling/Management. Currently, it is in operation world wide, providing scalable solutions based on specific transit authorities size and capacity requirements.

Currently the dispatch office does not operate the same hours as the actual service and as a result users are able to book times by leaving messages that are then responded to the following day. The requirement to book rides 24 hours in advance has been established to ensure that adequate time is given to the dispatcher to look at the most effective way to schedule these trips in order to maximize resources and to provide adequate notice to users on potential delays. Handi Transit dispatch offices can experience issues with system stability as a result of the inherent issues in booking processes that involve multiple care givers involvement in user's daily activities. Recently, the level of change within Handi Transit has created gaps in abilities of the system adding to these already existing stability issues. With the changes in software, the department has moved from a high level of human input and control to that of system control and reliance, a fundamental shift in process and business application. As a result of this, on a daily basis resources are required for mitigating and / or resolving problems. These issues often include small issues such as frequent fielding of calls by users of the system for booking confirmation. Examples such as these further compound the ability of the group to complete and maintain the work load requirements for successful operation on a daily basis.

The pressure on the dispatch office will continue to grow. As demand for trips increases, so too will the need for access to the office for booking and support. Support within this office will be critical in maintaining the communication from users to the system. This will include the evaluation and review of practices for mitigation and resolve of issues outside of system, as well as implementation of tools and resources to improve stability in the operation. These tools may include options such as automated/online booking and confirmation, and auto phone notification of "bus on its way" to "bus early" or "bus late". The balance between stabilizing the system and the demand by users to continually improve the offering will require a focus on developing system confidence and efficiencies for both users and operators of the system.

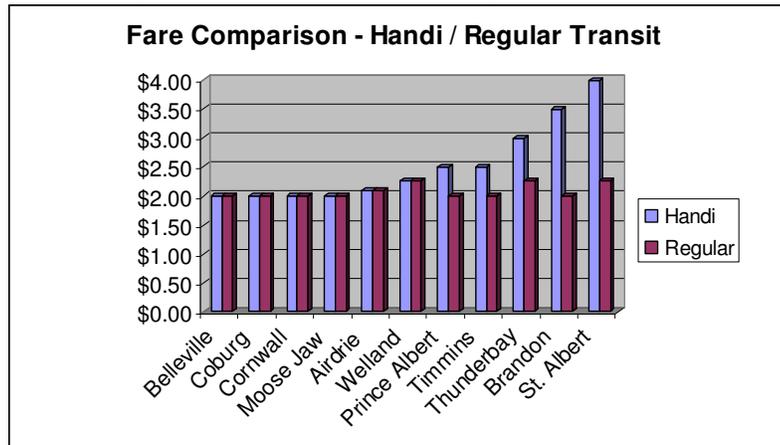


#### 4.4 Fares

As indicated in the Regular Transit fare section, over the previous decade transit authorities have been under increasing pressure to obtain adequate fare revenues as costs have continued to rise. This is particularly true with respect to Handi Transit whereby the cost of the system is driven through usage, and generally the overall cost of the system increases with each trip accessed. Due to the user's reliance on the system, the issue of fare elasticity does not have the same impact on this system. However if fares increase to the point where social services or individuals are not able to absorb the increase, then the issue of obtaining viable employment and participating in social and community events become limited.

Currently, the fare for Handi Transit in Brandon is on the higher end of the fares being charged to users for cities in the population range of under 50,000. Of this group, nearly 50% of municipalities charge increased rates to access Handi Transit in comparison to Regular Transit.

**Fare Comparison - 2007 Handi / Regular Transit**



In 2000 according to a report by Sypher Mueller, Brandon Transit was ranked as the highest Handi Transit fare in the country at \$3.50 for cash, and \$3.25 for ticket. Following this, the fares were adjusted and the following table represents a history of Handi Transit fares between 2000 and 2007.

**Handi Transit Fare History**

Year	Cash	Ticket
2000	\$3.50	\$3.25
2001	\$2.50	\$2.50
2002	\$2.50	\$2.50
2003	\$2.50	\$2.50
2004	\$3.00	\$3.00
2005	\$3.50	\$3.50
2006	\$3.50 (60 trips/month) \$7.00 (61 + trips/month)	\$3.50 (60 trips/month) \$7.00 (61 + trips/month)
2007	\$3.50 (60 trips/month) \$7.00 (61 + trips/month)	\$3.50 (60 trips/month) \$7.00 (61 + trips/month)



One of the largest challenges in trying to reduce the fares has been in the increasing cost of operation. As will be discussed in the Section 4.6 Operational Efficiency Section of this report, the service has been operating 20 year old equipment and the increase in cost of operation has ultimately meant that in order to keep some balance between cost and revenue, the fares have had to increase over time.

In an attempt to not require fares to be increased across the board for all users and to keep the cost versus revenue in balance, in 2006 Brandon Transit introduced a graduated fare schedule. The graduated fare schedule offers up to 60 trips per month at the base rate of \$3.50, and all trips above this at \$7.00 for that same month. This trip coverage window permits higher frequency users who are traveling for employment, education and or high frequency medical appointments capacity to travel in the range of 3 trips per day of service at the base rate. As indicated in Section 4.1 Rider Profile, the average registered user accesses Handi Transit in the range of 8.25 trips per month. Only 2% of users either exceed or approach on a frequent basis the 60 trip per month threshold.

Increasing pressure will be placed on the transit system in not only providing adequate service and capacity, but secondly affordable transportation solutions. In this vane, Brandon Transit may be required to continue to explore additional revenue opportunities in an effort to offset or improve per trip Handi Transit costs. Fares strategies alone will not assist in offsetting costs of operations in the Handi Transit service industry.

#### **4.5 Communication and “Buy In”**

Over the previous 18 months, Brandon Transit has worked to develop and network with key members and representative bodies from our user base. In this time, much progress has been made in developing the user communities understanding of the sensitivities and potential within the transit system.

##### **Handi Transit Advisory Group – (formerly MLPD Advisory Group)**

Early in 2006, the Handi Transit Advisory Group that works with Brandon Transit was revamped and revitalized. In this process, the committee established the mission statement; “Working to provide an affordable, safe, and accessible transportation service that will be sustainable while meeting the ongoing needs of our community.”

The group meets monthly to discuss and resolve pertinent issues related to providing accessible transportation for all citizens within the City of Brandon. Additionally, the group has become a significant contributor in the areas of accessibility and awareness within the City of Brandon. Brandon Transit has worked with this group in the promotion and sharing of critical information within the system. This process is paramount given the speed of change and needs within the system. To date, the group has added a bi-annual news letter to the users of the system carrying useful “did you know” and “how to” information. Most recently, the group has assisted with a user survey yielding 72% participation, and spearheaded adding Handi Transit service availability to the Lieutenant Governors Winter Festival. This group should develop into a key partnership in promoting and communication of handi services, the needs of the users and the needs/requirements of the system.



## **Dispatching and Operating Staff**

As the frontline and face of our system, Brandon Transit dispatch and operating employees too will be key in the area of communication and “buy in”. Specifically, on a daily basis the group will be required to communicate consistently on issues or problems as they occur. Equally as important they will offer information to assist users in understanding the impacts of their decision making on the performance of the overall system. For example, when a rider is not ready at the time of pick up it will mean an impact to other riders throughout the day when the bus runs late as a result. Helping riders to better understand these issues should mean improvements in service and a clearer understanding as a whole on the performance and challenges in operation. In support of this, administrators of the system will be required to develop and enforce policy that will support the dispatchers, operators and thereby the initiatives of improving capacity to meet the demands of the system.

In 2006, a significant portion of work has gone into the development of driver training manuals and providing training to drivers to ensure that they feel comfortable in the technical aspect of assisting people and in promoting the policies of the service. The drivers and dispatch are now meeting regularly to address issues between the groups in order to provide a better service to the users. The better the understanding of the entire system and the challenges should result in improved overall performance for all parties involved in the operation.

## **Provincial and Day Program Services**

Recently, Transit Administration has been working closely with the Provincial Government, and various day programs in communicating the changes and policies of the system. A significant portion of our current users are living with some level or type assistance and it will be equally important to communicate to the key support staff that assist them on a daily basis. In many cases the staff is responsible for things such as bookings, user’s timing of preparation for trips, etc., and therefore communication to the rider alone will not assist with improvement or solutions to issues. To compound this, often those support staff requesting a booking for a user is not present at the time the booking is requested for, therefore information transfer between staff is critical to ensure the system works effectively. Another of the challenges that these groups face is high staff turn over, making the establishment of ongoing communication tools between these services and Brandon Transit essential. The work to date in this area has included information sharing sessions with administrators and support staff within those systems. Work must continue in this area to develop partnerships that will promote effective usage of the system, thereby creating positive perceptions and subsequently trip efficiencies. Brandon Transit, the Provincial Government, and various day programs must work in concert to develop understanding of perspectives, goals and issues within each of the programs and secondly, the current and future transportation services requirements.

## **4.6 Operational Efficiency**

In 2000, due to concerns about ridership declining a study was commissioned through Sypher Miller International called A Review of Accessible Transit. The goal of the report was to outline steps that could be taken to maintain or improve service to the registered user while potentially decreasing the cost of service to the City. At that time there were approximately 175 registered users and the service operated with two low floor buses



and one back up bus. The productivity of the service was 1.9 trips per hour and was identified as having one of the lowest productivity levels in Canada. Fees were \$3.50 for cash and \$3.25 for tickets and were at the high end of the scale in terms of fares across Canada. There were a number of recommendations that were identified out of the study including acquiring software for client records and scheduling, providing registrants with ID, implementing a twenty minute pick up window, providing users a reduced fare for riding regular transit, contracting out Handi Transit after 2002, and limiting the number of subsidized rides on the system. While many of the recommendations have been considered and/or implemented over the past few years, there are a number of factors that have changed since the time of the report and as such some of the recommendations are no longer relevant.

### **Productivity**

Productivity of a Handi Transit system is measured in how many trips are serviced in a 60 minute time span. As a result, this measure can be impacted by a number of different factors including:

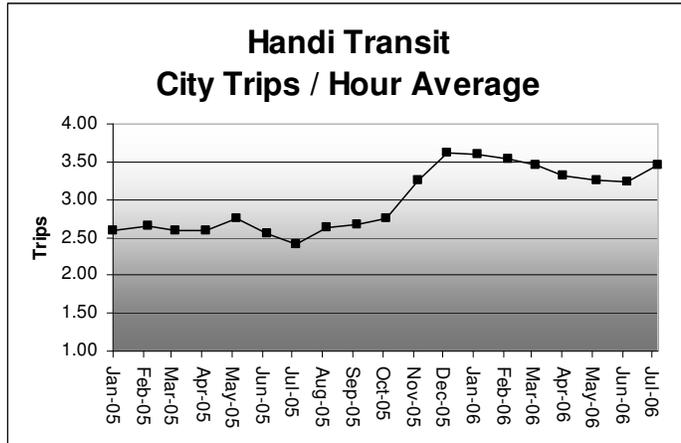
- Length of trip
- Ease of loading / unloading
- Wait time
- Time / distance between rides
- Equipment – loading and restraining systems

As can be identified in the chart below, Brandon Transit has realized continuous improvements in terms of trips per hour since 2002, when productivity was identified to be 1.9 rides per hour. The more recently trended improvements were accomplished through programming and system efficiency work performed in cooperation with the Amalgamated Transit Union and the operators beginning in 2005. This program has focused on removing the barriers and wait times, batching of rides to maximize trips in terms of distance traveled, and introducing the expectation of shared ride services to our ridership. This work continues though recently, trip productivity ranges appear to have peaked in the 3 trips per hour range.

It is important to note that trip performance measurement in terms of trips per hour may not continue to be the measure of performance within the system. New tools made possible by the NOVUS program (dispatching software) will now offer additional views including that of bus slack time, trip distance productivity, on time compliance, etc. It is important to note that these measures track performance of the mechanics of the system solely, and do not quantify the various issues that impact those mechanics. It is important to keep logs of the various events (both positive and negative) that occur over time in order to understand the correlation between those types of events and the actual performance of the system. In doing so it allows for the anticipation of performance and for the system to make corrections to minimize those impacts. A lack of attention to the user and user supports side of the system will not assist in driving performance in the system alone. Measurement components important in this program will be the ability to record and report user system compliance.



## Average Trips per Hour



It is also important to note that trip productivity may continue to see changes with the continued emphasis on safety and well being of riders / operators. Recently with the purchase of new buses, implementation of the new forward facing and four point securing systems has been introduced – today’s standard within the industry. These initiatives all add to the overall trip time required to restrain and transport users of the system.

Further impacting measures of productivity will be the ability of Brandon Transit to identify the need for implementation of additional service requirements by demand. This augmentation of service only when and as required by demand is important when evaluating costs per ride of the system.

### Contracts

Currently, Brandon Transit contracts ambulatory trips over and above the capacity of the buses in operation by the City. In the past, there were contracts in place for mobility aided service needs as well, but with the decision in August 2006 by the contractor to no longer provide this service, Brandon Transit made the decision to bring this work back in-house based on the efficiencies that had been gained over the last year. As indicated earlier in this report, ambulatory demand accounts for 29 percent of the total bookings on the system. At the point of initiation of the current contract, Brandon Transit set a goal of using the contractor for 15 percent or less of ambulatory demand. This was done in an effort to balance overall trip costs in maximizing trip performance on City buses where demand permitted. Since this date, the department has averaged 13.8 percent usage of contract for provision of services. As overall Handi Transit demand increases, Brandon Transit will be required to continue to re-evaluate the need to utilize the contractor to augment service and increase the target threshold.

In terms of wheel chair/mobility aided service, in the past Brandon Transit has used the local contractor for medical call backs because of the nature of the uncertainty in the demand. Medical call backs are phoned in based on when the rider has completed their appointment or received their treatment. The level of variability has made it difficult to schedule these rides and as a result there can be a significant delay in picking up the person with the medical appointment, or a delay in service to others. With no local contractor options now being available it has required some changes in scheduling and



a loss in overall system efficiency. The ability to attain contracts as concerned to Handi Transit service provision would be helpful in assistance and accommodation of peak demand requirements, and secondly in providing balance for cost comparison within the system.

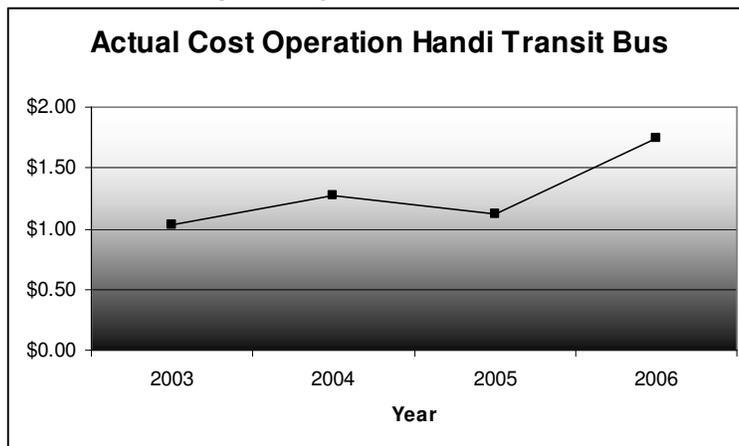
As indicated earlier in this report, over the past decade Handi Transit users within the City of Brandon have realized reduced private/contract transportation options. More recently, the closing of private Handi Transit service providers within the City of Brandon has further increased reliance on Brandon Transit for peak demand, holiday and Sunday service. At present, typical users of the Handi Transit system are presented with no transportation opportunities outside of their personal support network for peak demand, holiday and Sunday service. Brandon Transit will be required to evaluate and recommend the requirements for service enhancements in support of the Handi Transit users of the City and in doing take into consideration the lack of a contractor to support the system.

**Equipment Performance**

Similar to that of the regular transit fleet, prior to the end of 2006 Handi Transit operated two low floor buses aged 19 and 21 years. Operationally, both buses were experiencing fatigue and frequent failure resulting in high costs of maintenance. In August 2006, when the decision was made to internalize all Wheel Chair Handi Transit services, three new buses were ordered. Since this date, two buses have been placed into operation, yielding reduced costs to the department. In March 2007 the third new bus will be placed into operation, placing one of the low floor buses into a spare role.

The operation of the Low Floor style buses over the previous four years is highlighted in the chart below. The department will begin to yield improvements through the use of the Eldorado Style units. These units will operate with efficiencies similar to that of the Eldorado buses implemented into regular service. Experience with these units has run in the range of \$.49 per kilometer, so it is anticipated that the operating costs of the new buses will be at least half of what is being spend on the current ones.

**Handi Transit Operating Costs**



Since the introduction of the low floor Handi Transit buses over twenty years ago, several changes in industry and subsequently technology have occurred. Twenty years ago, the typical Handi Transit bus was a low floor unit with a ramp for exit and entry.



Wheel chairs were secured into the bus sideways facing, and generally mobility aids were under a two point system. Over the last decade, an increase in popularity of the high floor shuttle bus with a lift for Handi applications has all but entirely removed the low floor bus from the industry. This has been due mainly to the initial cost of purchase of the low floor being two and a half to three times that of the shuttle style. As indicated earlier, these new buses bring with them improved safety and user restraint systems, as well as improved operational costs. As demand for the system continues to grow, additional units will be required to accommodate trips. This planning has been included in the Handi Transit Capital planning Appendix B.

## **5 Handi-Transit Recommendations**

The following is a list of recommendations from each of the elements that were described above. The implementation of these recommendations are planned to occur over the next two years as outlined in Appendix E.

### **5.1 Rider Profile**

- 5.1.1 Work with the larger scale programs and groups to explore the options of transit friendly time schedules in and around peak load times. (2007, 2<sup>nd</sup> – 4<sup>th</sup> Quarter)
- 5.1.2 Explore and evaluate the impact augmentation of service to meet the needs of peak demand. This evaluation shall provide guidelines for the implementation of additional services to meet peak demand that maintain flexibility and operational efficiencies within the system. (2007, 2<sup>nd</sup> – 3<sup>rd</sup> Quarter)

### **5.2 Legislation**

- 5.2.1 Develop and present transparent consultative processes that ensure the needs of the residents and community at large are presented and met with respect to access to affordable transit for the users of our systems. (2008, 2<sup>nd</sup> Quarter)

### **5.3 Dispatching**

- 5.3.1 Review and develop requirement for the dispatch office service span to match the Handi Transit service span. (2007, 2<sup>nd</sup> Quarter)
- 5.3.2 Continue to pursue full implementation and adherence to the NOVUS program to fully utilize the program's capabilities in attaining predictable and executable schedules under capacity loading circumstances. (2007, 4<sup>th</sup> Quarter)
- 5.3.3 Focus on communication and customer service thereby promoting positive perceptions of the system by the users, assisting with system "buy in". (2007, 2<sup>nd</sup> Quarter – 2008, 1<sup>st</sup> Quarter)
- 5.3.4 Establish and adhere to prescribed service standards that focus on serving the customers and operators within the system. (2007, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)
- 5.3.5 Identify additional opportunities within the capabilities of new or "add on" service modules for the program that will aid in further efficiencies and improved customer service. (2008, 1<sup>st</sup> – 3<sup>rd</sup> Quarter)



## **5.4 Fares**

- 5.4.1 Develop an understanding of the Governmental Models for those in assisted living programs, along with expectations of those models on public transportation systems. (2008, 1<sup>st</sup> – 2<sup>nd</sup> Quarter)
- 5.4.2 Continue to evaluate the fare levels with respect to the cost of operating the system. (2007, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)

## **5.5 Communication and “Buy In”**

- 5.5.1 Pursue partnerships with those organizations serving our existing rider base in an effort to align expectations, and improve efficiencies of Brandon Transits handi system. (2007, 2<sup>nd</sup> Quarter – 2008, 1<sup>st</sup> Quarter)
- 5.5.2 Review and develop communication and customer service standards. (2007, 4<sup>th</sup> Quarter – 2008, 2<sup>nd</sup> Quarter)

## **5.6 Operational Efficiency**

- 5.6.1 Ensure that monthly internal equipment rates allot sufficient funds into the capital reserves for the replacement of vehicles at the end of their planned lifecycle and for major refurbishment costs during the equipment lifecycle. (2007, 1<sup>st</sup> Quarter)
- 5.6.2 Replace vehicles as per the capital replacement plan presented to City Council (Appendix B) based on a full life cycle costing which takes into account the initial purchase cost of the equipment, fuel efficiency, maintenance and insurance costs. (2007, 1<sup>st</sup> Quarter)
- 5.6.3 Continue to develop Performance Measures that will permit Brandon Transit to offer efficient, reliable and economical services, and that secondly offers measurement data for comparison against other municipal transit authorities. (2007, 2<sup>nd</sup> – 4<sup>th</sup> Quarter)
- 5.6.4 Implement a “Smart Driver” program in an effort to develop driving habits to assist in reduction of fuel consumption and brake maintenance costs. (2008, 3<sup>rd</sup> – 4<sup>th</sup> Quarter)



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## Appendix A – Regular Transit Capital Replacement Plan

Bus #	Bus	Years Replacement	2007	2008	2009	2010	2011	2012	2013
BUS – 15	1993 New Flyer	16			40'				
BUS – 16	1990 MCI	16							
BUS – 17	1990 MCI	16		30'					
BUS – 18	1988 MCI	16		30'					
BUS – 35	1989 Orion	16	30'						
BUS – 19	1988 MCI	16	30'						
BUS – 44	1992 MCI	16				40'			
BUS – 1	2005 Eldorado	5					24'/30'		
BUS – 2	2006 Eldorado	5					24'/30'		
BUS - 3	2007 Eldorado	5					24'/30'		
BUS – 4	2008 Eldorado	5					24'/30'		
BUS - 5	2009 Eldorado	5					24'/30'		
BUS – 45	1995 New Flyer	16						40'	
BUS – 46	1997 Nova Bus	16							40'
BUS – 49	2002 New Flyer	16							
BUS – 50	2002 New Flyer	16							
Total Cost of Capital / Year			\$680,000	\$680,000	\$430,000	\$430,000	*\$650,000	\$430,000	\$430,000

\*2011 Total Cost of Capital/Year is based on replacement of the current 24' High Floor Buses. Increases in ridership or changes in accessibility standards may necessitate the need for 30' Low Floor Buses at a total cost of 1.5 Million



**Appendix B – Handi Transit Capital Replacement Plan**

<b>Bus #</b>	<b>Bus</b>	<b>Years of Service</b>	<b>Routes</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
HT BUS - 1	2005 Eldorado	7	Handi	24'							24'
HT BUS - 2	1988 Orion	7	Handi			24'					
HT BUS - 3	2006 Eldorado	7	Handi	24'							24'
HT BUS - 4	2006 Eldorado	7	Handi	24'							24'
HT BUS - 5	New Addition	7	Spare				24'				
<b>Total Cost of Capital / Year</b>				<b>\$330,000</b>		<b>\$110,000</b>	<b>\$110,000</b>				<b>\$330,000</b>

## **Appendix C – Brandon Transit Service Standards & Performance Indicators**

Brandon Transit had established the following goals in 2002;

- Provide an effective means of transportation for individuals who are without access to an automobile for reasons of health, age or income.
- Provide an efficient public transit service within the financial capability of the City of Brandon.
- Support the general urban development goals of the community by improving the accessibility to the central area to promote downtown expansion, meeting the travel demand generated by the higher density suburban growth and expanding the regular transit service where warranted by demand and where the need for supplementary service is identified.
- Provide spare or alternative capacity for Brandon's transportation system for seasonal variations in demand or for special events.
- Provide a transportation option, which has the potential for reducing the environmentally negative impacts of other transportation modes.

These goals represent the system, whereby the following Service Standards and Performance Indicators were developed and governed by these goals.

### **Service Standards**

The following Service standards were proposed, or amended as part of the 2002 Review performed by Entra Consultants;

#### **Area of Service**

The regular urban transit service shall be confined to those urbanized portions of Brandon within the City limits, except where operation will make a positive contribution to financial and performance targets.

#### **Coverage**

Regular urban transit service will be provided during weekday and Saturday service hours within 400 meters of at least 95% of all residences, major concentrations of work, and public services and facilities.

#### **Minimum Hours and Frequency**

The Minimum Hours and Frequency of Service of the Brandon Transit System shall be established by resolution of council and shall remain in full force and effect unless an until revoked or amended by resolution of said council.

#### **Schedule Adherence**

Buses will operate so as to provide 95% schedule performance (defined as being not more than three minutes late according to the printed schedule, 95% of the time).

#### **Maximum Number and Frequency of Transfers**

To provide a no transfer service between as many residential areas as possible and the downtown core, and a single transfer service to most major designated employment or school complexes. To provide a service that requires no more than two transfers between all points in the City. Where transfers are required, try to

facilitate them through timed transfer points.

### **Location of Bus Stops**

Bus stops will be provided at an average spacing along the route of four stops per kilometer. Actual location will recognize physical and safety constraints on the street. In general, at intersections, far side stops will be preferred. Bus routes will be planned to use collector and arterial streets.

### **Provision of Bus Shelters**

The target will be to provide at least 10 percent to 15 percent of all bus stops with bus shelters and to allocate the stops using a criterion which includes as major factors, the actual use of the stop, the environmental need, and the physical feasibility. As general criteria a shelter should be provided where there are 35 or more boarding passengers per day.

### **Loading Standard**

The scheduled service should be such that bus loads per route on a standard 40-foot bus should not exceed 1 ½ times the seated load, 95% of the time, and that the average hourly bus load does not exceed a seated load.

### **Quality of Transit Equipment**

To maintain revenue vehicles and passenger shelters at a standard of cleanliness that ensures public complaints are minimized.

To maintain revenue vehicles to a standard that ensure that the number of road calls per 1,000 kilometres does not exceed the average of properties in the same industry group size range.

To adopt maintenance standards, vehicle replacement policies and plant improvement policies to ensure that the cost of servicing and maintenance increases at less than the general rate of inflation over any five year period.

### **Marketing and New Service Policies**

To promote the use of public transit among the general public and specific user groups.

To provide public information services that continually increase the passengers' certainty and confidence in their use of the transit service by providing schedule route and use of information on a system wide basis and all the bus stop level of detail where possible.

To improve driver/passenger relations.

To provide quick response to public complaints and inquiries.

### **Introduction of New Services**

Services will be introduced or changed only after the proper investigation has been completed to forecast demand, revenues and costs. In each case, a trial period should be established together with a ridership objective. The annual budget will clearly identify any approved amounts for demonstration projects.

**Co-ordination with Land Use Development**

Transit will provide comments relating to the transit implications of proposed land use developments and/or changes in the road network.

**Service to New Residential Areas**

Transit Service should be introduced into new subdivisions as early possible after the first residents begin to move into the area and when it is estimated that at least 30% of direct operating costs can be met from fare box revenue.

**Industrial Services**

Service should be introduced into the industrial areas when there is reason to believe that the route will return 20% of its operating costs in fare box revenue. The introduction and staging of industrial services will be upon sufficient demand and when provided will make convenient connections to all parts of the transit system.

**Performance Indicators**

Brandon Transit currently assesses its routes with cost recovery as the key economic performance indicator.

With respect to regular route services, the standard states:

It is desirable to recover from user revenue, at least 50% of the system's total operating cost.

And with respect to charter services:

To operate charter services so that they recover the direct operating costs and make a positive contribution to general overhead costs.



